MARCH 1997

FAA Aviation news

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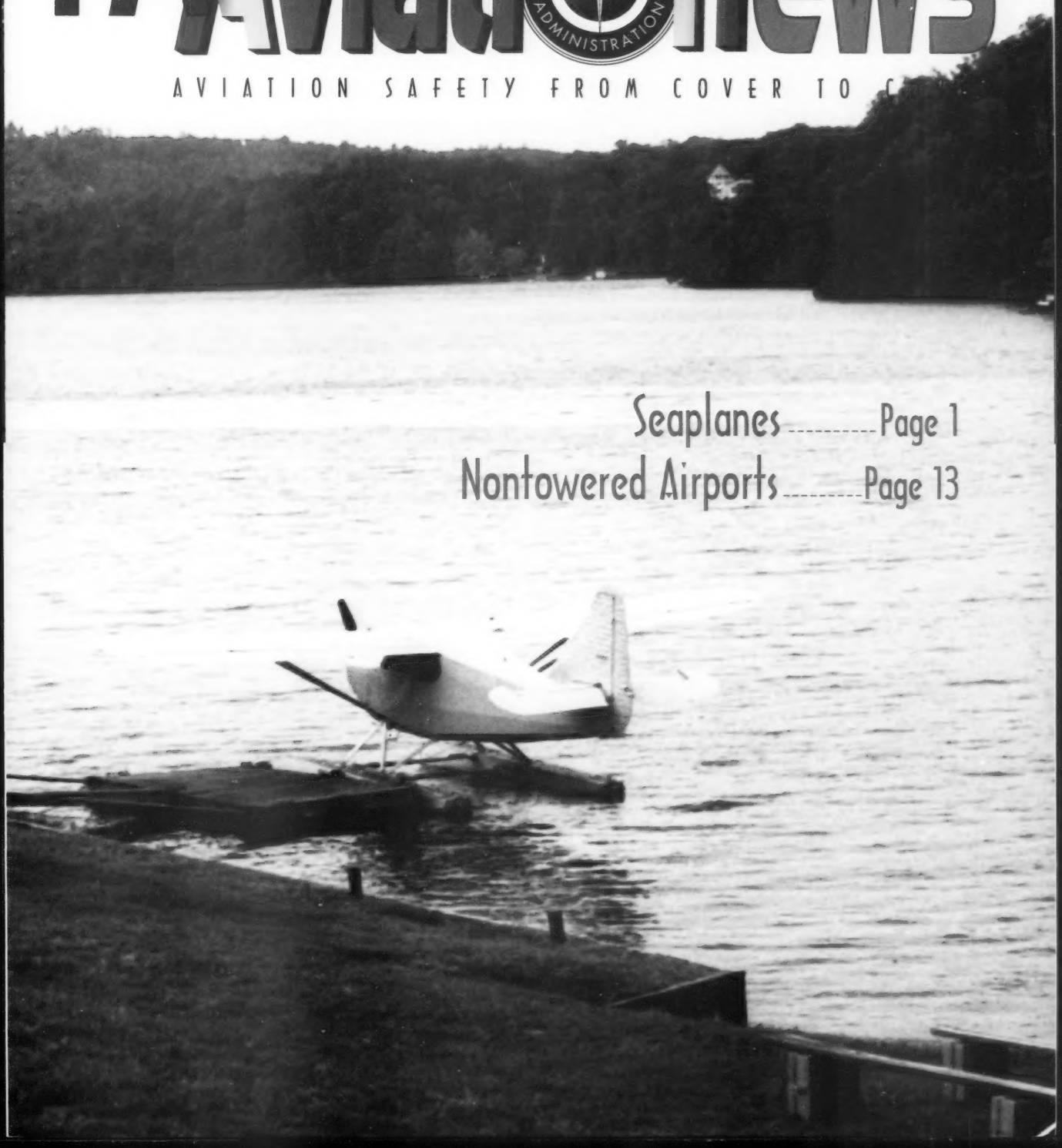

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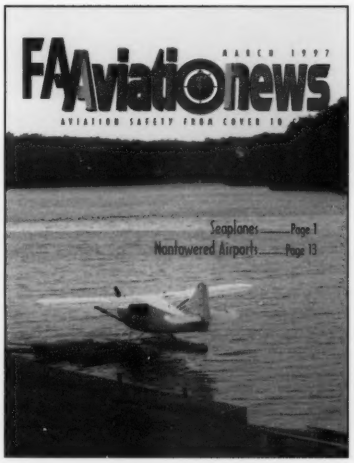

COVER: Photo by J. J. Frey, taken at the 1996 Ware Island, Alabama Seaplane Fly-In.

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SEAPLANE SAFETY ISSUES

Part 1 - Accident Analysis

by Phyllis Anne Duncan

In these pages in past issues both I and Associate Editor Dean Chamberlain have extolled the virtues and pleasures of flying seaplanes. And rightly so, since both of us are seaplane pilots. It is relatively easy to obtain a seaplane rating. I did it at a small seaplane operation in East Haddam, CT over a long weekend—about five days of ground school, familiarization, and practicing takeoffs and landings and other maneuvers on the water. Dean went to a small operation as well in Philadelphia, PA for his single-engine seaplane rating in a similar amount of time. Some time later he took a couple of weeks off and got a multi-engine seaplane rating at a well-known and popular seaplane base in central Florida. Again, if you're already a pilot, picking up the water operating skills is quick and relatively easy.

As with any endeavor and with any certificate or rating, becoming a proficient seaplane pilot requires experience and practice. As I've said before, seaplanes can combine the best of two worlds—aviation and water recreation.

Also as mentioned before, we seaplane pilots, when we use popular water sites—at least those that still allow seaplane operations—we may have an extra "PIC" responsibility. By regulation we are responsible for the safe operation of the aircraft, but we also have to look out for people on the water who may be fascinated by this large and commanding water creature, the seaplane, but who may not know anything about safely avoiding a spinning propeller. There is a favorite pastime among operators of personal watercraft, for example, one that has proved fatal—jumping the wakes left by powerboats. Accidents have happened when the quicker more maneuverable personal watercraft have leapt a wake, done a 180 to repeat, and collided with a slower-moving powerboat. Some of those accidents have been fatal, usually to the operator of the personal watercraft. If these "hotdoggers" enjoy wake-hopping behind a powerboat, imagine the way a seaplane step-taxiing will set their hearts aflutter.

Seaplane pilots have another responsibility, too, a hidden one. Seaplanes may be perceived by the non-aviation public as noisy and dangerous. In many ways because of a lack of understanding about the versatility and purpose of seaplane operations, people and local governments have reacted negatively to seaplane activity, often without cause. The result has been restrictive local rules and regulations prohibiting seaplane operations in some sensitive areas. Part of our responsibility as seaplane pilots, then, may be not only to educate the public but also to operate as the most knowledgeable and proficient seaplane pilot possible; that is, to put our best float forward at all times.

To help the seaplane pilot with his or her responsibilities, this three-part series will try to provide some background on seaplane accidents (Part 1), how people react to seaplane noise (Part 2 in April), and explain just who has jurisdiction over what (Part 3 in May/June). A major resource for these articles is a report released in May 1996 by the Seaplane Pi-

lots Association (SPA) entitled, "Seaplane Compatibility Issues." This report focuses as well on safety, noise, and jurisdiction.

The report opens by stating:

"Seaplanes are the historical heart of aviation. Pilots have flown off-the-water since the beginning of flying itself. Yet, seaplanes sometimes meet resistance, even strong opposition, from concerned citizens and elected officials. Controversies usually center on safety and noise....[I]t is important to remember that concerns about safety and noise are real."

So, Are Seaplanes Safe?

According to National Transportation Safety Board (NTSB) accident statistics, over a 13-year period from 1983 to 1995, there have been as few as five seaplane accidents in a year and as many as 37. Over that 13-year time there were a total of 195 seaplane accidents on the water. (There were 338 accidents involving seaplanes, but only those which actually involved seaplane operations on the water are presented statistically here.) Of 438 people involved in the 195 accidents, there were 54 fatalities, and 49 people sustained major injuries. More than half the people involved had no injuries at all.

Over the 13 years studied, only three accidents occurred involving boats, and there were three fatalities in the boats. In six accidents, boat wakes were cited as contributing factors to a seaplane accident; i.e., there was no collision between the boat and the seaplane. In one accident, the seaplane pilot maneuvering to avoid a boat was cited as the probable cause. Property damage—excluding the seaplanes and boats involved—was almost nonexistent over the 13 years.

So, what, you say, do people have to complain about?

As SPA says in its report, "After all, seaplanes operate off lakes and rivers, even canals and small harbors, and many times are in...proximity to boats and beaches. This capability can cause concern."

Given the misconceptions among the public about aviation in general and small aircraft in particular, it is easy to see how the public can be concerned. And the industry, FAA, and the NTSB became concerned as well when the total number of accidents per year exploded in 1993: from 11 in 1992 to an incredible 36. If that weren't bad enough, in 1994 there were 37 accidents. In 1993 for the first time in the 13-year accident study period, seaplane accident fatalities went to double digits—11, followed by 15 in 1994. Two of those accidents over those two years involved collisions with boats where the occupants of the boats were killed. This prompted the NTSB to issue safety recommendations concerning seaplane operations to which the FAA has chosen to respond in the interest of safety with the publication of this three-part series of articles.

Probable Causes and Contributing Factors

A few years ago, we published an article called "Breaking the Chain," which described how accidents are rarely the result of a single, catastrophic event but rather the result of a string or chain of events which, if unaltered, leads to an inevitable conclusion. Break the chain of events, and you avoid the accident. You break the chain through proficiency, good judgement, and situational awareness.

Seaplane accidents are no different. The "top three" causes of the seaplane accidents in the study were "improper technique or procedures" (61 occurrences), a grab-bag probable cause that can encompass any deviation from proper operating procedures; "landing in water with wheels extended" (27 occurrences; five of which were caused by mechanical failure), which occurs when an amphib lands on the water with the "gear" down; and "poor weather, gusty winds" (26 occurrences), which includes not dealing with crosswinds or wind shear. The fourth leading cause of accidents was "glassy water" (11 occurrences), the bane of seaplane pilots where calm, flat water diminishes depth perception.

Two other leading causes were "striking a submerged object" (nine occurrences) and "rough water" (six occurrences). These top six causal factors were cited in 138 of the 195 accidents—72%. (Actually, there was one fairly interesting probable cause that came in last, that is, the least occurring probable cause: "alligator avoidance." That could be a story in itself.)

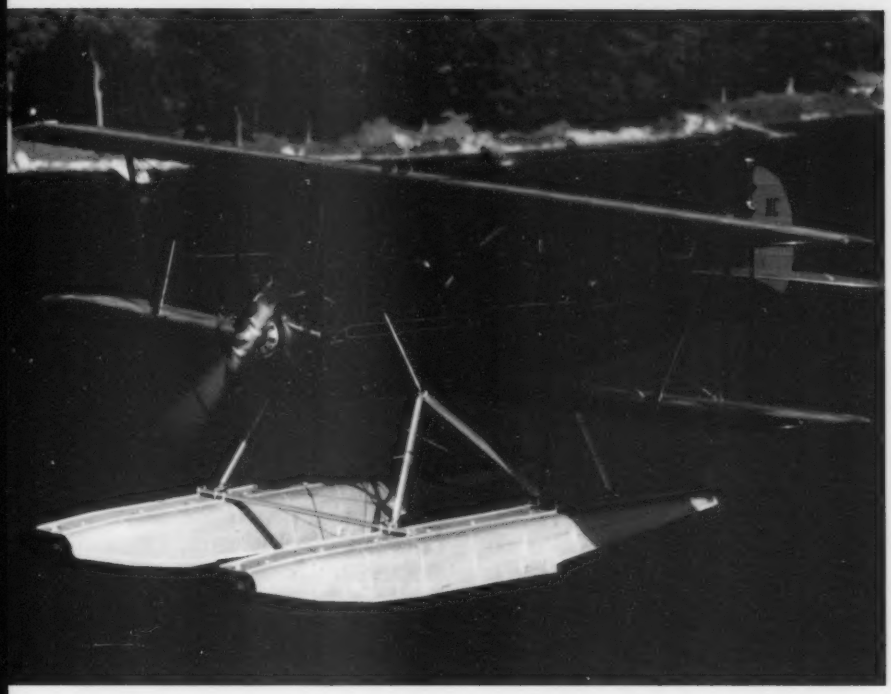
"Alcohol or drug involvement" was cited in four accidents, and that's four too many.

Improper Technique or Procedure

In accidents attributed to this, there may have been contributing factors such as rough water or high winds, but there are established procedures for dealing with such conditions. If the seaplane pilot failed to follow those established procedures or misapplied them, then the probable cause of "improper technique or procedure" is designated. Included in this is improper preflight judgement—deciding to fly in bad weather, not bilge pumping the floats, etc.

To protect yourself against using an improper procedure or technique, practice and proficiency are the key. This was one of the reasons the Pilot Proficiency Award Program initiated its SEAWINGS aspect last year. (See the October 1996 issue of FAA Aviation News.) Seaplane pilots were always eligible for the Wings program by virtue of the fact that seaplanes are also airplanes, but the requirements to receive the distinctive SEAWINGS address specifically seaplane operations. After the start of the Wings program, general aviation enjoyed (and still does) a long decrease in accidents; hopefully, SEAWINGS will do the same for seaplane pilots.

Even if you don't opt for SEAWINGS, proficiency or recurrent training in seaplanes is not terribly expensive. My seaplane base in East Haddam used to offer four hours of recurrent training for $99. For a hundred



bucks a quarter, you can assure yourself of year-round proficiency this way. Besides, it never hurts to fly with an instructor once in a while.

Water Landings with Wheels Extended

Isn't it ironic that if you're a land-only pilot, you have to remember to put your gear down, but if you're landing an amphib on water, you have to remember to keep your wheels up? It can be confusing. Landing an amphib with the gear down on water means your floats take on water, and the aircraft is in danger of sinking. Only in five of the 27 cases of landing on water with the gear down was there mechanical failure. The other 22 pilots may have benefited from using a checklist to assure the gear was up. If you've just come from a retractable gear land plane to an amphib, your situational awareness of your landing gear will only be enhanced by strict adherence to the pre-landing checklist.

Poor Weather, Gusty Winds

Seaplanes are not any more susceptible to bad weather or turbulence than land planes, but seaplanes operate into more areas where there is no capability to report weather or into areas where terrain turns a mild wind into various shears and crosswinds. Again, seaplane pilots receive training on how to spot phenomenon that may estimate from where and how strong the winds are blowing, and again, refreshing that training periodically is essential. And remember, anytime you have a lot of water, you have the potential for ground fog that can sock you in once you land or obscure obstacles on your approach. Granted, if you're flying into areas where there is no weather reporting capability, you will have to learn enough about weather and its movements to extrapolate on your own. PIREP's—getting and giving—are a good source of information.

Glassy Water

You'd think seaplane pilots would want absolutely calm water, wouldn't you? But glassy water—flat, calm surface that reflects like a mirror—can be one of the most dangerous conditions a seaplane pilot can face. Picture this: Try staring into a mirror and "reaching in" to pick some object up; your hand smacks the mirror before you realize how close your hand is to it. Seaplane pilots who attempt to approach and flare at the correct height above glassy water are destined to smack the surface of the water. When your hand hits a mirror, you're likely to receive a sore knuckle or two; when your seaplane smacks glassy water—well, it is not pleasant.

Here is where proper technique comes into play. For a glassy water landing, you set up in landing attitude and fly the seaplane with power onto the water, but you use your peripheral vision for cues to your height—trees or structures along the shore. When you touch the water, power off, and you've made a safe, glassy water landing.

You can practice glassy water landings on non-glassy water so that you can become proficient before actually being put to the glassy water test. Of course, you use a little more room with this technique, so you have to be sure your waterway is long enough. Although no accidents were cited in the study where seaplanes "landed long," running up on someone's boat docks does not improve the public's opinion of seaplanes.

Striking a Submerged Object

If you're lucky to land in crystal clear water, you can better spot submerged objects, but often you don't have that luxury. I was taking a seaplane refresher in East Haddam a few years ago after a week's worth of rainstorms and some minor flooding. The Connecticut River was muddily opaque and full of floating tree limbs and lawn furniture. It was quite a challenge to find a landing spot. When objects float you can spot them, but treat them like ice bergs—the biggest portion is probably hidden underwater.

Overflying your landing area is a good idea to spot sandbars or submerged logs, and, of course, just like taxiing slowly on the surface, slow water taxiing will diminish the damage if you do encounter a submerged object. Granted, step-taxiing gets you

where you're going faster, but if you know there are conditions as I described above, you may have to forego step-taxiing. In fact, it's best to treat any landing area unfamiliar to you as chock full of submerged objects and use caution.

Rough Water

Seaplane pilots don't want glassy water, and they don't want rough water. (Is there just no pleasing us?) Rough water may not only beyond your capabilities to control the airplane in pitching waves, it may be beyond the aircraft's capabilities as well. What's rough water? At times you may not know it until you touch down on it, but there are a number of clues before that. You can look for the typical things a land pilot looks for: how quickly columns of smoke dissipate and at what altitude, how rapidly and to what extend leaves on trees move around, and—big clue here—white caps on the water.

Rough enough water can cause break-up of your aircraft on the surface at the worst or damage it to the point where you cannot takeoff again. Cited with this type of accident as contributing factors were things like "poor pilot judgement" and "improper technique."

The Where of Seaplane Accidents

If we would just allow seven states to secede, the seaplane accident rate would be pretty good, but since those are the states with the most seaplane activity, it wouldn't do much for the industry.

All joking aside, the states—in order—where the most seaplane accidents occurred over the 13-year period were:

Alaska	70
Florida	18
Washington	15
New York	10
Maine	9
Michigan	9
Wisconsin	9
Total	140

(72% of total accidents)

Let's take a look at this. Alaska, which boasts the largest seaplane base in the world, Lake Hood, has more than one-third of the seaplane accidents. When viewed this way, that statistic makes sense; there are more seaplanes and the exposure is greater. I said it was understandable but not an excuse.

Florida, which includes the Keys, has the second highest. Again, there is a large concentration of seaplanes in the state and traveling to the state. You have year-round conditions for seaplane flying and lots of inland and coastal water.

Washington state has Lake Union, a downtown Seattle seaplane base. New York borders on the Great Lakes and has lots of inland water, as do Maine, Michigan, and Wisconsin.

Do I detect a pattern here? Could it be that the states that have the most water available have the most seaplanes? Could it be that those same states attract seaplanes to fly there for that very reason? And—a quantum leap of logic here—could it be where you have more seaplane activity, you have the most accidents? Eureka! (My parents would be so proud that that education they paid for bore some fruit.)

Through humor I've tried to make a point. Seaplane accidents happen where there are seaplanes, but car accidents happen where there are cars. You don't see local governments banning cars from a stretch of road that has experienced a spate of accidents, but they jump right to the front to keep those horrible, dangerous seaplanes away from the public even when the accident statistics don't support such action. (You know, the way people are driving lately, we may be safer in a seaplane.)

What we can do as seaplane pilots is be as careful as we can possibly be when we interact on the water with boaters, operators of personal watercraft, canoers, etc. It's a lot of responsibility to place upon us—responsibility not only for ourselves and our passengers but others on the water as well. In SPA's report they discuss three factors that can help us: a higher pilot standard, cockpit discipline, and judgement.

Seaplane Versatility Requires a Higher Pilot Standard

SPA believes that the seaplane's versatility, that ability to go where other aircraft can't, demands peak pilot performance and skill. Whereas SPA doesn't advocate increased regulatory standards—nor does the FAA at this point—they encourage seaplane pilots to hold themselves and each other to a higher standard. Recurrent and proficiency training is the best way to attain those higher standards.

Cockpit Discipline Necessary in an Environment of "Freedom"

The seaplane frees us from the usual aviation environment. Somewhat like the good Starship Enterprise, in a seaplane we can go to a mountain lake where no one has flown before. SPA believes—as I do—that with this freedom of choice comes responsibility to exercise our skills and use good judgement.

SPA cites the accidents whose probable causes were listed as pilot failure: landing in the water with wheels extended, for example. Adhering to checklists, as we've said, shows cockpit discipline. Maybe, just maybe if we can convince the public that we are as conscientious, as much of an adherent to cockpit discipline as our airline pilot siblings, it will go a long way toward convincing them seaplanes—or any small plane—are safe to co-exist with.

Judgement, A Necessary Element

Adhering to a higher standard and exercising cockpit discipline are inextricably linked with good judgement. Using good judgement may be as simple as acquiring, absorbing, integrating, and using all possible information that affects a flight. (Does this sound like FAR 91.103, Preflight action?)

Some people say you can't teach a person good judgement, but studies have shown you can change behavior, and essential to changing some behavior is incorporating better use of one's judgement. The FAA's Aviation Safety Program introduced at Oshkosh last year a new concept in exercising judgement—the Personal Minimums Checklist. Explained in an accompanying video by John and Martha King, the Personal Minimums Checklist gets you to take a hard look at your flying skills and abilities and encourages you to set your own minimums—higher than the ones required by the FAR. The next step is to commit them to writing on a free Personal Minimums Checklist brochure. You can change your minimums as you progress in experience and proficiency. It's a great concept and is just as useful to seaplane pilots as land pilots.

Of course, the flight instructor is the first line of offense in instilling a pilot with good judgement, and learning from our close calls leads us to change behaviors to those that show the exercise of good judgement. But taking any commercial or homestudy that emphasizes decision making and common sense will help you transfer those skills to aviation.

Because we operate seaplanes in an other than "normal" environment and because those operations may be subject to stricter public scrutiny, we particularly need to exercise good judgement and common sense.

Some Conclusions About Seaplanes and Accidents

In its report, SPA comes to several conclusions about seaplane accidents with which we agree. One concerns the risk of operating seaplanes on the same water as recreational boats, a typical issue of concern to government jurisdictions seeking to restrict or reject seaplane operations.

The accident statistics do not support the conclusion of some communities that seaplanes are dangerous to operate in proximity to boats: three accidents in 13 years. Consider some U.S. Coast Guard statistics cited by SPA: In the same 13-year period of seaplane accidents (195 total accidents with 57 total fatalities, remember), there were 30,000 boat-to-boat collisions resulting in 12,000 fatalities. Unlike pilots, in many states, operators of boats take no special training and receive no certification.

But before I get accused of "promoting" the aviation industry, let's go over some of SPA's conclusions:

- Over the 13-year study period there were probably hundreds of thousands of hours of seaplane operations with relatively few accidents.
- When accidents occurred they mostly involved only the occupants of the seaplane.
- Collisions between seaplanes and other vessels were rare—"very rare," as SPA says.
- Even serious seaplane accidents are survivable. Of 438 people involved in the 195 seaplane accidents, 335 received minor or no injuries even when the aircraft was substantially damaged or destroyed.
- Seaplanes have successfully comingled with other vessels according to the NTSB accident statistics—only three boat to airplane accidents over 13 years.
- The accident statistics also show there is little risk to waterside structures or facilities or other property from seaplanes.
- The fact that seaplanes are more versatile as far as landing sites are concerned may contribute to this safety record, especially when good judgement is exercised in the selection of a landing site.
- The seaplane safety record may be attributable to the fact that the vast majority of seaplanes operate in day VFR.

Even though there were only three boat/seaplane accidents in a 13-year period doesn't mean the possibility doesn't exist. Personal watercraft are the fastest growing aspect of recreation. Even if the number of seaplanes doesn't grow, the number of watercraft they share the surface with will certainly grow, and the potential for a problem does exist. However, that problem can be addressed by higher personal standards, cockpit discipline, and good judgement.

Both formal and informal safety education opportunities can be instrumental in addressing this potential problem. Seaplane safety seminars put on by the SPA and the Aviation Safety Program and programs which encourage recurrent training, such as SEAWINGS, show that the industry and its regulators work hard for safety.

Seaplane safety can be made safer. SPA has many suggestions in this area, which we won't go into here, but suffice it to say they are a knowledgeable and willing resource for local governments in designating seaplane operating and parking areas.

We can spend all our time educating seaplane pilots about boaters, but we can't neglect the other part of the equation—teaching boaters about seaplanes. Brief familiarization on seaplane operation on the surface of water could be an integral part of boater safety courses in the U.S.

Back to the Basic Question

Are seaplanes safe? Can they coexist safely with boats? The answer is a qualified yes. Accident statistics indicate that they can, but that is not a laurel for us to rest on. Any aspect of aviation can only be made safer, and we seaplane pilots have a responsibility to ourselves, our passengers, our pastime, and the public to be as safe as we can possibly be.

We can only change the concerned citizen's mind by example.

Part 2 in the next issue will deal with noise, which is an understandable concern, but one which other aspects of aviation have shown is workable.

For more information about the Personal Minimums Checklist, contact the Safety Program Manager at your local FAA Flight Standards District Office.

How To Buy a Seaplane While Keeping Your Head Above Water And Other Interesting Sea Stories

by H. Dean Chamberlain

As a retired Marine, I thought I had heard about every type of sea story imaginable. But I was wrong. (For those not of the sea services, sea stories are usually short, fictitious yarns passed from one generation to the next. Most are funny. Many have a lesson. Some are not repeatable in polite company. But they all add to the culture of the sea services.) Last September I attended the third annual seaplane safety seminar at the FAA Safety Center at the Lakeland Linder Regional Airport, Lakeland, FL, where some great sea stories were told during the all-day seminar. Stories not only repeatable in polite company, but stories that should be repeated in all types of company and especially in the company of aviators.

These exciting sea stories told of the unique operating capabilities and needs of seaplane pilots. Many of the stories were told by J.J. Frey, President of the Seaplane Pilots Association, a Vice-President of Edo Floats, and a seaplane pilot with almost 5,000 hours. His snippets of seaplane wisdom and lore included a great discussion on how to buy a seaplane plus some interesting sea stories about the fun and benefits of seaplane flying. Seaplanes, he said, are special because they allow those who love to fish or explore the great outdoors the chance to fly into the lakes and areas of Alaska and Canada that are so remote the only way to visit them is in a seaplane. In many cases, some of the areas are so remote if you want to visit them, you must either fly into them in a seaplane or hike in. The choice is yours.

But before you rush out to buy a seaplane for your next great adventure, you need to read Frey's suggestions on how to buy a seaplane. If you don't, you might find yourself getting in over your head. We want to thank him for sharing his ideas. We have the liberty of adding to his ideas and comments where we wanted to emphasize a particular safety point. If you want additional information on seaplanes, we suggest you contact the Seaplane Pilots Association (SPA), 421 Aviation Way, Frederick, MD, 21701, (301-695-2083).

SOME THINGS TO CHECK WHEN SEAPLANE SHOPPING TO AVOID GETTING WET

1. Make sure you review the seaplane's logs for any record of the aircraft being sunk or of any water damage in addition to the normal things you would check when buying any aircraft. You may want to hire an independent, experienced seaplane A&P mechanic who knows what to check on that particular make and model as part of your checkout. You need to check that all airworthiness directives (AD's) have been complied with.

2. If buying a floatplane, it is critical to make sure that the installed floats are approved for use on that particular make and model of aircraft. Some aircraft type certificates (TC) list the types of floats approved for that make and model aircraft. If the TC lists the types of floats approved for the aircraft then the only requirement to mount a set of approved floats on the aircraft is a logbook entry signed off by an appropriately rated mechanic. The mechanic will also have to recompute the weight and balance for the aircraft with the floats installed. If the TC does not list any approved float installations, then the aircraft's records must contain a supplemental type certificate (STC) entry or a FAA Form 337 completed for the installation. It is important that the installation conform to the aircraft and float manufacturers' recommended procedures. This type of installation must be signed off by a certificated mechanic with inspection authorization. A new weight and balance must also be recomputed for the aircraft and floats.

3. If you are buying a floatplane, you need to make sure the correct size floats and mounting hardware have been installed. More than one floatplane has had the wrong size floats and hardware installed. You can check with the float or aircraft manufacturer for a list of approved floats for a given make and model of aircraft. The same is true of floats. Float manufacturers publish lists of aircraft makes and models approved for different float designs and sizes.

4. If the aircraft was built as a landplane and then converted to floats, you should check to see if and how the aircraft was protected against corrosion when the floats were installed. One way to check is to compare a factory-built seaplane of that model, if one was produced, against the converted land-based model. Normally, factory-built seaplanes have corrosion protection built into them at the factory such as stainless steel control cables and internal corrosion inhibitors, etc. Factory-built seaplanes may also have additional fuselage reinforcements, etc. When comparing the two models, you should check to see if any of the unique seaplane items/changes were made to the land-based airplane during the conversion process. We

are not saying converting a land-based airplane to a floatplane poses a safety issue. We are saying that depending upon the scope of the conversion process used to convert a land-based airplane to a floatplane, there may be some future economic issues involved that may not be a factor if you buy a factory-built floatplane. For example, you might have to do more corrosion preventive maintenance if you are operating in a salt-water environment with a land-based converted floatplane than with a factory-built floatplane with built-in corrosion protection.

5. Depending upon the type of water the seaplane has operated on, salt water or fresh, you may want to do a more in-depth corrosion inspection before you buy the aircraft if it was operated on salt water. Salt water is more corrosive than fresh water. If you are buying a floatplane, the floats, attachment parts, and rigging must be part of that inspection process.

6. When considering performance data, you must remember that floats may and probably will reduce the aircraft's performance.

7. Amphibious floats reduce performance more than straight floats because the amphib's wheels and operating mechanism add extra weight to the amphib floats. Amphib floats also require more maintenance which means increased maintenance costs.

8. A good rule of thumb when looking at a seaplane is: If it doesn't look right, it probably isn't. Have an experienced seaplane A&P mechanic or operator check it out for you.

9. If you are looking at floatplanes, the spreader bar between the floats should not be bowed. If it is, have your A&P mechanic check it out. It may be damaged and need replacement.

10. If you want a really good check of a floatplane, you should ask the owner to take the floats off the aircraft and to separate the floats so you can inspect the spreader bars, and the float installation's main bolts and attachment hardware for corrosion and wear. You should also check the aircraft's log for how long the bolts and hardware have been installed. A rough

NEW SEAWINGS PROGRAM

Betty Myer of Ware Island, AL, told about how this seaplane safety seminar and similar FAA-recognized seaplane safety seminars help seaplane pilots meet one of the requirements of the FAA Pilot Proficiency Award Program's new SEAWINGS program, a program designed by and for seaplane pilots.

More commonly known as the "Wings Program," the FAA Pilot Proficiency Award Program now has a unique segment just for seaplane pilots. Seaplane pilots who complete the seaplane flight training requirements outlined in FAA Advisory Circular 61-91H can now apply for a distinctive set of SEAWINGS from the FAA though their local Flight Standards District Office's Safety Program Manager.

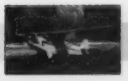
The new SEAWINGS program is a cooperative effort between the Seaplane Pilots Association and FAA designed to increase seaplane safety through increased seaplane pilot proficiency training. The SEAWINGS insignia was designed by the SPA, and it donates the SEAWINGS for the program.

SELECT 1997 SEAPLANE FLY-INS AND SAFETY SEMINARS

The fourth annual seaplane safety seminar and fly-in at the FAA Safety Center in Lakeland is September 27, 1997. For more details you can contact Jack Brown Seaplane Base at 941-956-2243; or Obie Young, the Orlando FSDO Safety Program Manager, at 407-648-6956.

The following is a partial list of other seaplane fly-ins and safety meetings provided by the Seaplane Pilots Association (SPA) that will help you meet the requirements for your SEAWINGS. You can contact the Seaplane Pilots Association for more events and details by calling 301-695-2083..

DATE	EVENT AND POINT OF CONTACT
Apr. 6-12	Sun 'n Fun Fly-In, Lakeland, FL. Call SPA.
Apr. 26	12th Annual Seaplane Safety Seminar, Lake Hood, AK. John Pratt, 907-274-2990.
June 13-15	24th Annual Seaplane Safety Seminar, Camp of the Woods, Speculator, NY. Call 518-548-4311.
Jul. 30-Aug. 5	EAA Convention & Fly-In, Oshkosh, WI. Call SPA.
Aug. 15-17	13 Annual Central Canada Seaplane Safety Seminar. Dale DeRemer, 701-772-4313.
Sept. 5-7	International Seaplane Fly-In, Greenville, ME. Call SPA.
Sept. 5-7	Columbia Seaplane Pilots Annual Splash-In. Call SPA
Sept. 5-7	Washington SPA Olympic Splash-In at Lake Cushman, WA. Call SPA.



rule of thumb is about 15 years service life for hardware on straight floats, and eight to 10 years is about average for amphibious floats.

11. Check any seaplane for algae contamination because algae can cause corrosion problems. You will need to check out each float or hull compartment very carefully for any evidence of corrosion.

12. Check the aircraft and all hardware and attachment points for structural damage. Rough water and submerged objects pose potential problems for all seaplanes. Check the hull or floats for excessive water leakage. The aircraft's fuselage should also be carefully inspected for any damage where the float attachment hardware is mounted to the fuselage. Hard or rough water landings can result in fuselage damage that may be expensive to repair.

13. Check the engine/s for all factory recommended baffles and engine compartment seals because proper installation is important for engine cooling and airflow through the engine. Generally speaking, seaplanes fly slower and operate hotter than landplanes.

14. And remember, each type of seaplane, float or hull, with its respective type of engine installation, tractor or pusher, has different flight characteristics. For example, aircraft with tractor or pusher engine installations generally respond differently to power changes. One may pitch up with a power increase. The other may pitch down. Although both types may be single-engine aircraft, they may fly differently. To be safe, you need to get a good checkout from a knowledgeable and current seaplane instructor before you take off into the wilds in a different type of aircraft. What may be a good habit pattern in one aircraft, may cause an accident in another.

MORE THINGS TO THINK ABOUT

In addition to Frey, Charlie Melot, the owner and general manager of Zephyrhills Engine, Zephyrhills, FL, spoke on seaplane engine maintenance and operation. Frey describes Melot as, "The best diagnostic engine guy I know."

In his discussion, Melot made one important point stand out. Seaplane engines work harder than their land-based kin. According to him, it is important that seaplane owners and pilots take even better care of their seaplane engines than their land-based counterparts might take care of their engines.

Melot said frequent engine oil and filter changes are particularly important. In addition to changing oil and oil filter regularly, Melot recommends people cut open their old oil filters after removing them to check for any metal contamination. Early detection of metal particles in your oil or trapped in your oil filter followed by prompt engine maintenance helps reduce the risk of major engine damage or possible inflight failure.

Oil analysis is another important way to check the health of your engine. In this test, a sample of your engine's oil is sent to a laboratory to be tested for metal contamination. Although one test can easily detect significant amounts of metal in a sample, a better way to protect an engine is to do periodic oil analysis tests. This way, a base line can be established for your engine and any abnormal trends can be detected early before any significant damage is done to an engine.

Melot reminded everyone that seaplane pilots need to pay particular attention how they operate their seaplanes and engines on the water because of the damage water spray can do to propellers and the seaplane. Proper takeoff techniques can reduce prop damage while minimizing engine abuse.

OPERATIONAL ISSUES AND THINGS THAT GO SPLASH

John Rennie, a former high-time seaplane instructor at Jack Brown Seaplane Base and now a corporate pilot who returned to Florida to share his seaplane knowledge at the seminar, told the audience of some important safety considerations unique to seaplane pilots.

Seaplanes on the water are always in motion, and once they are free on the water, they can't stop because they don't have brakes. Unlike land-based aircraft that normally don't move with the engine idling and the brakes set, a seaplane on the water with its engine running wants to move, and unless it is tied down or being held by someone, it will move. Because of this constant movement, seaplane pilots must always be aware of the consequences of that movement including the effects of any wind and current on any unrestrained seaplane.

Because of the effects of all of these outside influences, seaplane pilots must always have a safe way out of or an alternative plan for getting out of any situation in case the aircraft loses power.

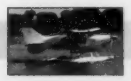
Rennie told maybe the best sea story of a seaplane pilot who, not wanting to wake his friends early one morning at a seaplane fly-in on a Caribbean island, decided to let the ocean current drift him away from the island so that he could then start his engine without disturbing his friends. The problem was his engine wouldn't start. After running his battery dead trying to start the engine, the pilot then didn't have enough power to operate the radio.

He had no way of telling his friends he was in trouble as he drifted further and further out to sea.

Fortunately, a passing fishing boat found him and towed the seaplane and its hapless pilot back to the island. Of course, pilots being pilots, you can imagine the humiliation and grief the poor pilot faced from his friends as he and his aircraft were unceremoniously towed to the beach.

IMPORTANCE OF FLIGHT AND FLOAT PLANS

This example is a great reason FAA Aviation News thinks pilots should always file a flight plan or leave their itinerary and expected time of return with someone they can trust to notify authorities in case the aircraft fails to re-



turn. It is also important that a flight plan or expected time of return information be provided before every flight and especially when operating in remote areas. Our poor fly-in pilot should have considered the island a remote area because it's a great big ocean out there and seaplanes are so very small.

Obviously, he should have radioed for help long before he drained his battery trying to start the engine. Other things we think would have helped include having a portable aircraft or marine radio, a portable GPS, and a survival kit on board. A signaling mirror and flares should have been included. They can be life-savers when you are trying to attract help.

We also wonder if he had any drinkable water on board. What do you think? What other items do you think would have helped him if he had not been found by the boat's skipper. Do you carry such items? If not, why not?

DANGERS OF THE DEEP

Seaplane pilots have another problem that their land-based counterparts normally don't have. Few land-based pilots have to worry about a hyperactive 11-year old or an equally hyperactive 50-something year old going on 11 in a high powered bass boat or on a personal watercraft wanting to pull along side their aircraft to say hello or to race. Not only does the boat pose a serious danger to the aircraft, but few boaters realize the danger of a rotating aircraft propeller.

MUTUAL RESPECT FOR OTHERS

Jon Brown of Jack Brown Seaplane Base put all of this in context when he said seaplane pilots and pilots in general must always look out for the safety and concerns of others.

Because seaplane pilots share an important natural resource with boaters, beachfront homeowners, and others who enjoy the outdoors and water activities, it is important that all seaplane pilots respect the rights of others while minimizing the impact of their flight operations on others sharing the water. The three-part series on seaplanes that we started on page 1 of this issue will address not only safety and noise, but "neighborliness."

Such things as following the right of way rules both in the air and on water, watching out for boaters, and minimizing overflights of nearby homes and boats are a few of the many ways seaplane pilots can be good neighbors on the water.

A SAMPLING OF SEAPLANE SAFETY

Undecided about attending one of the seaplane safety seminars we listed earlier? Check out a report on last year's Speculator Lake Seaplane Fly-In and see just how much safety can be packed in a weekend. The report was provided by Mr. Mark Furman (no, not that one!) the Safety Program Manager at the FAA's Albany Flight Standards District Office.

Once again the clouds parted for an almost perfect weekend at the 23rd Annual Seaplane Pilots Safety Seminar at Speculator Lake nestled in the Adirondack Mountains of upstate New York. This getaway, organized by the Albany Flight Standards District Office and sponsored by the Seaplane Pilots Association as well as many seaplane and float manufacturers, continued to follow the tradition of providing excellent safety information for the seaplane pilots of the Eastern United States.

Some of the pilots arrived early for the Wilderness First Aid Course. An instructor provided hands-on training in first aid procedures and medical knowledge for those who fly many miles away from conventional health care. The first of the safety seminars began on Friday morning with an excellent presentation on the state of the art GPS equipment available and how they work. There were pitot-static testing services on the beach at a reduced rate. After a long break for visits to local restaurants, the pilots returned for METAR/TAF training. This was followed by a seminar on the care and repair of aircraft propellers. An FAA pilot safety briefing finished out the afternoon.

Friday night activities kicked off with dedication of the Seaplane Pilots Museum located at Piseco Airport and a brand new safety video on seaplane safety called, "License to Learn." The evening concluded with an introduction to the new SEAWINGS program (see page 7).

The Saturday morning Float Flying and Safety Subject Panel Discussion was well attended and allowed for group interactive discussion on a variety of subjects. The keynote speaker for the day was an air safety investigator for the National Transportation Safety Board, who presented data on seaplane accidents from a five-year period and provided insight and focus to the reaons for the increasing accident rate.

Attending were 372 people from 19 states and Canada, and many more stopped in to visit. Hope we'll see YOU this year!

SUN 'N FUN 1997

by H. Dean Chamberlain

If you are planning on flying to Lakeland, FL, for this year's Sun 'n Fun EAA Fly-in (April 6-12), now is the time to complete your travel plans. As part of those plans, you need to review the special Air Traffic Management Plan Notice to Airmen (NOTAM) issued for the event. The NOTAM provides detailed arrival and departure procedures for aircraft flying to the Lakeland area effective April 4-12. Note the special procedures start two days before Sun 'n Fun officially opens.

FAA SUN 'N FUN NOTAM, VIDEO, AND FREQUENCY CARD

In addition to the NOTAM, the FAA Office of System Safety has produced a video and frequency card highlighting the procedures outlined in the NOTAM. For a copy of the NOTAM, frequency card, and video you can call (941) 644-2431. You can also borrow a copy of the video from you local Flight Standards District Office (FSDO) by contacting your local FAA Safety Program Manager at the FSDO.

Sun 'n Fun information will also be published in the Special Airshow Section of the February 27 and March 27 FAA Notices to Airmen publication.

Even if you have flown to Sun 'n Fun in the past, you will still need to review the NOTAM for any changes. This year there is a temporary tower at the Plant City Airport.

If you have never flown to Sun 'n Fun, you need to get a copy of the NOTAM and study it in detail. You should also try to review a copy of the video. If you are a first time flight arrival, finding yourself number 10 in trail to enter the traffic pattern is not the time to wonder what is going to happen next.

Although the arrival and departure procedures are not complicated, they do need to be understood very well. The procedures are designed to move hundreds of aircraft safely, quickly, and predictably in and out of Lakeland by having both pilots and controllers follow the same published procedures. Knowing and following the published procedures are especially important in the case of an emergency at Lakeland.

Another important operational procedure is the limited use of radio communications to control aircraft landing or departing Lakeland. The NOTAM outlines when pilots should communicate and when they should just monitor their radios.

Strict compliance with the published communication procedures will avoid any unnecessary frequency congestion while speeding up the landing or departure process. But every pilot should contact ATC immediately if there is any question of safety of flight or in case of an emergency. Pilots should also remember some of the aircraft flying to and from Lakeland don't have radios.

The NOTAM has special sections for both IFR and VFR pilots.

VFR pilots should pay particular attention to the airspace information given because of the proximity of the Tampa and Orlando Class B airspaces. Like in past years, special procedures will permit aircraft without a transponder to fly in designated areas of the Tampa and Orlando Mode C Veils. The NOTAM has the details.

WAYS TO MINIMIZE RISK OF MIDAIR COLLISION

All pilots need to pay attention to other traffic as they approach the Lakeland area. Since there is such a performance mix among the different types of aircraft flying to, through, or in the Lakeland area, there is an increased mid-air collision risk. One way to reduce that risk is to fly with your landing lights and beacon or strobe lights on within 30 miles or so of Lakeland. If you are flying on an airway, you might want to extend that lights-on distance. Pilots need to be alert for traffic from any direction as they approach Lakeland. You can also monitor the appropriate ATC frequencies listed in the NOTAM when flying within the central Florida area. Everyone should also use the appropriate altitude for your direction and type of flight, IFR or VFR.

ELT MONITORING EN ROUTE

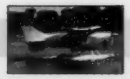
Pilots flying to and from Lakeland should periodically monitor 121.5 MHz en route to check for any activated emergency locator transmitters (ELT) that might be reporting an aircraft accident. If you detect an ELT signal, contact the appropriate air traffic control facility responsible for the area you are in with the information.

FUEL EXHAUSTION

Another potential problem for some aircraft is fuel exhaustion. Because of the potential delay with so many aircraft operating at Lakeland, including the risk of an accident on the field closing the airport for a while, all pilots should make sure they have enough extra fuel on board for the flight plus any required IFR or VFR minimums plus enough fuel for an inflight hold of at least 30 minutes or more. This is a case where the more fuel, the better. Just stay within your approved weight and balance limitations.

In addition to allowing yourself extra fuel, VFR flights should extend their projected flight plans by 30 minutes to compensate for any unexpected delays because of traffic.

All pilots should review the flight



plan filing and closing procedures in the NOTAM.

MAINTAINING SAFE FLYING SPEEDS

Because of the mix of traffic, all pilots might want to practice flying their aircraft at its minimum safe, the operative word is SAFE airspeed, before arriving at Lakeland. Whether you do it at home on a practice flight or en route to Lakeland, you should be able to control your aircraft safely at its slowest recommended airspeed, its normally recommended airspeed, and at a faster than normal airspeed. The reason is you may be mixed in with other aircraft that may be slower or faster than you. You may also need to be able to maintain your place in trail of other aircraft. But as the NOTAM states, if you cannot safely reduce airspeed to follow slower traffic, inform ATC and do not, we repeat do not, fly at any airspeed that jeopardizes your safety of flight.

The NOTAM explains in detail with charts and text the modified VFR arrival procedures in effect during Sun 'n Fun at Lakeland. All pilots need to review these procedures before arriving in the Lakeland general area because even IFR flights may be directed to follow the VFR procedures when the weather is VFR at the airport.

Because of the various planned flight activities at Lakeland during Sun 'n Fun and the special operating restrictions including when the airport is closed because of the daily airshow, all pilots need to review the NOTAM for such items as airport operating hours, arrival altitudes, airspeeds, airport surface operating procedures, airport safety notes, parking notes, and other operating procedures listed in the NOTAM.

ELT CHECK

After landing and before securing your aircraft, all pilots in radio equipped aircraft should do a final radio check on 121.5 MHz to check for an inadvertent emergency locator transmitter (ELT) activation. With the large number of aircraft attending Sun 'n Fun, you can imagine the difficulty in finding the source of an ELT signal.

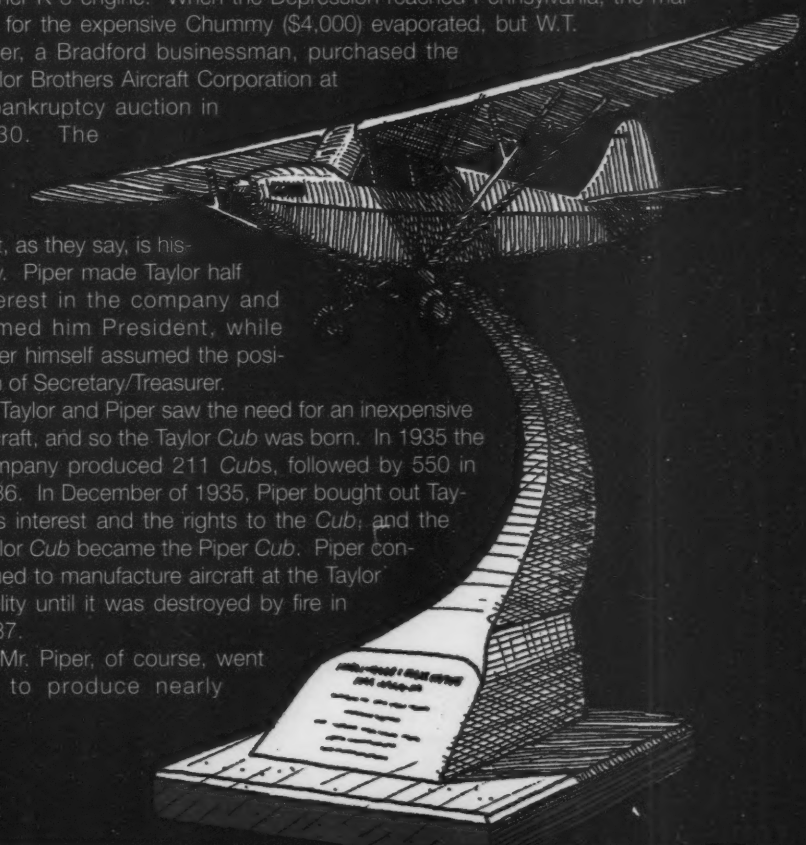
FAA SAFETY CENTER—WEATHER TO GO

While at Sun 'n Fun, visit the FAA's Safety Center for all your aviation needs. The FAA Safety Center has Flight Service Station specialists available for your weather and flight planning needs, Flight Standards aviation safety inspectors from the Orlando FSDO to provide support, various FAA displays and exhibits as well as an ongoing schedule of FAA and industry safety presentations. Many of the presentations are given by nationally known speakers. Attached is the schedule of FAA Forum presentations. The FAA Safety Center Forum area and Production Studios open daily at 8 am. For those who arrive early, the first day of Forum presentations starts on April 5, the day before Sun 'n Fun officially starts. In addition, for those who cannot attend a safety presentation, many of the presentations will be locally broadcast within the airport area by Sun 'n Fun Radio, WPEP 788 at 1610 on your AM dial. ✈

PIPER CUB MONUMENT TO BE ERECTED

Recently a group of Piper *Cub* lovers discovered that no permanent marker recognizes the *Cub*. The Piper *Cub*, originally the Taylor *Cub*, was born in Bradford, PA in 1930 in a small building at the Harri Emery Airport. (The airport no longer exists, but remnants of the historical site are evident.)

Just before the Great Depression, C. Gilbert Taylor moved his aircraft company, the Taylor Brothers Aircraft Corporation, to Bradford. There he began building the Chummy, a two-seat, high-wing monoplane powered by a 90 hp Kinner K-5 engine. When the Depression reached Pennsylvania, the market for the expensive Chummy ($4,000) evaporated, but W.T. Piper, a Bradford businessman, purchased the Taylor Brothers Aircraft Corporation at a bankruptcy auction in 1930. The rest, as they say, is history. Piper made Taylor half interest in the company and named him President, while Piper himself assumed the position of Secretary/Treasurer.



Taylor and Piper saw the need for an inexpensive aircraft, and so the Taylor *Cub* was born. In 1935 the company produced 211 *Cubs*, followed by 550 in 1936. In December of 1935, Piper bought out Taylor's interest and the rights to the *Cub*, and the Taylor *Cub* became the Piper *Cub*. Piper continued to manufacture aircraft at the Taylor facility until it was destroyed by fire in 1937.

Mr. Piper, of course, went on to produce nearly

SUN 'N FUN 1997 FAA SAFETY CENTER & PRODUCTION STUDIOS

SEMINAR SCHEDULE

(Subject to change without notice)

Saturday April 5

0800-0830 FAA Safety Center Opens
0830-0930 Teachers Workshop (Restricted)
1000-1100 Fast, Slow, and Half Fast Maintenance
1130-1230 Young Eagles Ground School
1300-1400 METAR/TAF-A Year Later
1430-1530 Takeoffs & Landings
1600-1700 Charting for Safety

Sunday April 6

0600-0700 Balloon Meeting (Restricted)
0800-0830 FAA Safety Center Opens/Overview of Programs
0830-0930 Aerodynamics
1000-1100 Ideas for Safe Flying
1130-1230 Aeronautical Decision Making
1300-1400 GPS
1430-1530 How to Avoid Unwanted Adventure
1600-1730 Ultralight Open Forum
1800-1900 Aviation Medicine Update

Monday April 7

0800-0830 FAA Safety Center Opens
0830-0930 Never Again
1000-1100 The Art of Flying Your Airplane
1130-1230 Meet the FAA
1300-1400 Medical Concerns
1430-1530 How to Avoid Unwanted Adventure
1600-1730 Cause & Prevention of Fuel Starvation
1800-1900 EAA-A Vision Towards 2003

Tuesday April 8

0800-0830 FAA Safety Center Opens
0830-0930 Why Smart Pilots Run Out of Fuel
1000-1100 Personal Minimums Checklist
1130-1230 How to Become an Aviation Safety Counselor
1300-1400 Most Dangerous Game
1430-1530 Most Dangerous Game
1600-1730 Rotax Engines
1800-1900 Windshear for the GA Pilot
1930- FAA Safety Forum Online

Wednesday April 9

0800-0830 FAA Safety Center Opens
0830-0930 GPS
1000-1100 Creative Solution
1130-1230 Flight Test Amateur Built Aircraft
1300-1400 Never Again
1430-1530 Why Engines Quit
1600-1730 Aerodynamics
1800-1900 How to Make a Living as a CFI
1930- Fun Night-Thanks for the Memories II

Thursday April 10

0800-0830 FAA Safety Center Opens
0830-0930 Why Homebuilts Are Having Accidents
1000-1100 New Initiatives in System Safety
1130-1230 Preventive Maintenance for Your Ultralight
1300-1400 WX Detection for the 21st Century
1430-1530 Amateur Built Aircraft
1600-1730 METAR/TAF-A Year Later
1800- Sun 'n Fun Awards Ceremony

Friday April 11

0800-0830 FAA Safety Center Opens
0830-0930 Airborne Comm & Nav Requirements
1000-1100 Aviation Judgement
1130-1230 Flying to Alaska
1300-1400 Break the Chain
1430-1530 Taking Care of Old Equipment
1600-1730 Aviation Rulemaking & Ultralights
1800-1930 NO EVENT
1930- Fun Night-Thanks for the Memories II

Saturday April 12

0800-0830 FAA Safety Center Opens
0830-0930 Crew Resource Management
1000-1100 I'm Not Lost; I am Location Challenged
1130-1230 Young Eagles Ground School
1300-1400 Finale, Awards, and Prizes

Uncontrolled Aviation

by Patri

H. Dean Chamberlain Photo

In a perfect world there would not be any rules to live by. There would be no need for control and the accompanying restrictions. Children would automatically be mindful and respectful of their parents. Drivers would instinctively govern their speed and conduct on the roads, etc., etc. Life, however, is not perfect and the powers that govern us determine the rules necessary to live by. Occasionally there are rules created in the Golden Ages that have made complete sense to the governing agent. Those same, sensible laws in this day and age may seem archaic.

Take for instance "Blue Laws." Some of these laws, designed to control conduct during the colonial period, still remain on the civil law books. Today they are nothing more than humorous anecdotes to the modern population. For instance, in some States it was illegal to kiss your spouse in public on a Sunday. To do meant languishing in the stocks until the offender appreciated the error of his or her ways. (It is fortunate for us that that particular law is not enforced; most of us would spend time in the stocks.)

Aviation, and resultant aviation law, has also evolved immensely since its inception from the progenitor of flight, the hot air balloon, to today's complex aircraft and spacecraft. I really find it hard to believe that the ancestors of aviation envisioned the magnitude of aircraft and pilots that there are today. Regulation of aircraft and pilots, as we know, has been a constantly changing issue.

The necessity for more regulation arouse as air commerce evolved, for the safety of passengers and people on the surface and to provide guidance and direction for the pilot.

In 1926 the Bureau of Air Commerce developed from the Department of Commerce's Aeronautics Branch. Then in 1936 the Civil Aeronautics Authority (CAA) was developed to control certification of air carrier routes, and Air Traffic Control was born. The year 1940 brought the split of the CAA into the Civil Aeronautics Board and the Civil Aeronautics Administration. With the split came the advent of governmental control of airman, safety enforcement, rule making, and accident investigation.

As the aviation industry grew, regulation became increasingly necessary in part because of the sheer volume of aviation activity. In 1958 Congress gave the Federal Aviation Agency sole responsibility and authority to regulate and enforce the regulations. And the Federal Aviation Regulations are con-

stantly changing to keep up with safety requirements of a continually growing aviation industry. In 1967 the Federal Aviation Agency was placed in the newly created Department of Transportation and renamed the Federal Aviation Administration.

In order to tell the whole story, statistics from 1994-1995 can show us how large aviation has become since its inception. Statistics show that there are 639,184 active pilots in the U.S. alone. Two hundred and fifty seven thousand, eight hundred and fifty seven (257,857) of those active pilots are Commercial pilots or ATP's working for a living in the aviation industry. That's a whole lot of people relying on 170,000 aircraft to get them safely from point A to point B. Those same 170,000 aircraft logged an estimated 24,000,000 hours of flight time in one year.

Speaking of points A and B, there are 18,224 airports in the U.S., including Alaska, and only 447 of those are controlled airports—have operating control towers staffed by air traffic controllers. Here in Alaska we have eight controlled fields and approximately 1,100 identified landing areas. In addition there are lakes and outlying strips in all states that are not officially counted but used all the same.

Referring to the statistical information above, it becomes obvious at this point that most air traffic control is "do-it-yourself" in nature. Air fields that had no positive control were at one time referred to as "uncontrolled" airports. "AHA!!!!," thought pilots, "An uncontrolled airport, huh!? I can do pretty much what I want." So the FAA changed the name, and with the name change, the connotation, to nontowered airports. (Nontowered refers to either airports that have no operating control tower or airports during the time when the control tower is not operating.) By doing so the responsibility of control was delegated to the users. Through the use radio contact on a Common Traffic Advisory Frequency (CTAF) and heightened traffic scanning at any given field, aircraft in the vicinity of that field can determine traffic flow and other information necessary for safe takeoff or landing. In the event that a CTAF is not designated at an airfield, the multicom frequency listed in the Aeronautical Information Manual (AIM) should be used.

Even though there is no Federal Aviation Regulation directly requiring communication at a nontowered field, the AIM gives pilots guidance in that area. The pilot becomes the controlling influence, and the subsequent responsibility of safety rests with the pilot.

As student pilots we were introduced to the seeming confusion of communications via an aircraft radio. At first the ability to communicate intelligently via this new medium was fraught with stumbling over your tongue and embarrassing mistakes. Soon the fledgling pilot had a handle on the daunting microphone and radio and began to sound like a pilot. (The mike intimidates most student pilots during initial flight training, second only to landing.)

Most of us received our first flight training either exclusively or in part at a nontowered airport. There we were the captain of our own ships, the masters of our fates. And when we were students we were probably the most diligent pilots we would ever be in our entire career. Everything was done by the book. The FAA Regulations and the AIM were our aviation bible, the good book by which we ate, slept, and dreamt aviation. Flight to a nontowered airport gave a sense of freedom and adventure but implied a responsibility as well. We followed the rules to the letter.

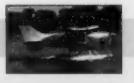
Approaching the nontowered field, attempting to sound professional, we reported on the CTAF inbound, then again on a 45 degree entry at pattern altitude, at the downwind, base leg, and final portions of our landing. Departing the field we reported our departure position and proposed departure path. We, as student pilots tried to do our best and to do it all by the book. Perhaps our instructor was within earshot, or it could have been that we were excited and amazed at hearing our own voice in the headset. Whatever the driving force, we did it right.

So what happened to the attention to detail when we became "Real Pilots"???? Suddenly it appears that all that valuable training flew right out the window. Radios were turned off at nontowered airports. Nonstandard patterns were improvised on the spot. It seems a few pilots have forgotten the common sense and the courteous attitude required in the nontowered environment to assure safety.

For example, straight-in approaches, common at tower controlled fields, can be a real problem at a busy nontowered field.

Several years ago, when I had a Cessna Pilot Center, I was out doing touch and go landings with a relatively new student pilot. It was a cold—as cold as Southern California gets—overcast day. The cloud bases were at 1,500 feet, and aircraft had been making the VOR approach, circle to land, to the field most of the day. My student was making all of the appropriate position reports on downwind, base, and final, as well as announcing that we were going to make touch and go landings. At one point we had turned to final approach and were well established on the approach when I heard, from the ground, "Patti, make an immediate left diving turn, NOW!!!" Recognizing the voice and the urgency, I instinctively complied. A twin Cessna that had been on a long, straight in approach flew past within feet of us, narrowly missing my plane, and landed. Had I not automatically reacted we would have been involved in a mid-air collision with the twin.

A quick thinking former student on the ground in the run-up area had the presence of mind to alert us of impending danger. As a result of that warning my student and I avoided becoming a statistic. Later, after I quit shaking—not out of fear but with fury—I went to the pilot of the twin. I read him the riot act, loud and long, about announcing position and listening on the radio for traffic in the pattern. Comment from the pilot was that it was legal to land from that approach. Legal, it might have been, but not a safe thing to do at a nontowered



field. There is no way a pilot can get a good view of traffic in the pattern while on a straight in approach. See and avoid is still the best policy.

By flying a circle to land maneuver, from a straight in approach, while remaining at an altitude above traffic pattern altitude, opportunity is given to other aircraft in the vicinity to observe your airplane entering the pattern and react accordingly. Always keep in mind that, like the danger to your car in a parking lot because of increased traffic, most accidents happen in the heavily trafficked vicinity of an airport.

Another situation that can cause an accident, especially at nontowered fields, occurs during the 45 degree entry to downwind. To descend while entering the 45-degree courts disaster. When two aircraft are entering the downwind, a pilot may not see another aircraft. If one aircraft is low wing and one high wing, the possibility of impact is heightened. The best plan of action would be to slow the aircraft to pattern speed and descend to pattern altitude before arriving at the 45 degree entry to the pattern.

Once in the pattern at the downwind position, remain vigilant for other traffic and expect the unexpected. Report your position along with your intentions, i.e., downwind for touch and go, full stop, etc. In addition to reporting each turn in the pattern, it is imperative to keep constant vigilance for other aircraft. The traffic pattern is one place where paranoia is indeed the height of awareness. On the road this heightened state of awareness is referred to as defensive driving.

The traffic pattern is no place to become complacent. If you have passengers onboard, ask them to become part of the crew by looking for traffic and alerting you to that traffic. This same advice is sound while taxiing on the surface.

Surface communication is as necessary at a nontowered field as it is at one controlled by a ground controller. Announce your position on CTAF when you taxi out of a tiedown area. Inform area traffic which runway you intend to operate on. Communication, while taxiing will facilitate initiating correct reactions from other aircraft in the air as well as on the field. Taxiing towards a desired runway only to find that another plane is taxiing in the opposite direction can result in a very confusing situation. I have had the experience of being nose to nose with another aircraft and not having the space to turn on a very narrow taxiway. Playing a game of chicken in an aircraft is no fun and stupid as well. After stopping on the taxiway, one of you has to get out and manually turn your airplane. Such embarrassment can be avoided by complete communications.

Announce your intentions on CTAF before beginning your takeoff roll, then wait a bit for a reply. Turn your airplane towards the oncoming traffic and take a good look for traffic in the area. Be prepared for an unexpected maneuver and allow sufficient time for spacing for arriving aircraft. Small aircraft close in can appear to be larger aircraft at a greater distance. Unless you are sure of the size and speed of the landing aircraft, wait for that plane to land and taxi off before beginning your takeoff roll.

I have seen aircraft taking off in tandem. A consideration with regard to tandem takeoff that I have always had is, what happens if the lead aircraft has a problem and comes to a stop on the runway? Would the aircraft in trail have a sufficient amount of time to stop? Just food for thought.

The Aeronautical Information Manual (AIM) tells us that the correct way to depart an airport is to continue straight out or exit with a 45 degree turn toward the crosswind to depart the area. It is amazing to see the variation of departures, unannounced, that pilots can dream up. A normal departure for a pilot I knew of was to rotate as soon as the plane would fly and immediately execute a hard right hand turn perpendicular to the runway. The fact that there was a grove of trees along the runway edge was of no concern to that pilot; that is, until he hit them. Fortunately, the pilot wasn't hurt, but the aircraft was in ruins, never to fly again, and the air blue from expletives.

Departing the area in a climb attitude reduces forward visibility. "S" turns on climb out increase forward visibility and are a good practice. In the vicinity of an airport arriving and departing traffic can be heavy. Keep track of other aircraft positions through communication. Contact aircraft in the vicinity in the blind on CTAF or other designated frequency. Report leaving the area, include your position and altitude. Who knows, another pilot may be entering the area at your position.

Another significant situation at nontowered airports is these are where the aircraft without radios are likely to be found. Whether they are homebuilts or antiques, our flexible Federal Aviation Regulations allow aircraft to operate without radios. The pilots of these radioless aircraft do not have an important anticollision tool—communications—but they do have a good set of eyes and must use them. Adhering to standard traffic pattern procedures is important for all concerned at nontowered airports, but it is especially true for aircraft without radios that cannot make position reports on CTAF.

I am sure that there is a plethora of advice and information on flying in the vicinity of nontowered airports that you have heard from instructors and other fellow pilots throughout your career in aviation. Experience is always the best teacher. We learn experientially during each and every flight. Whether the experience is a good or bad depends on how well we follow the rules.

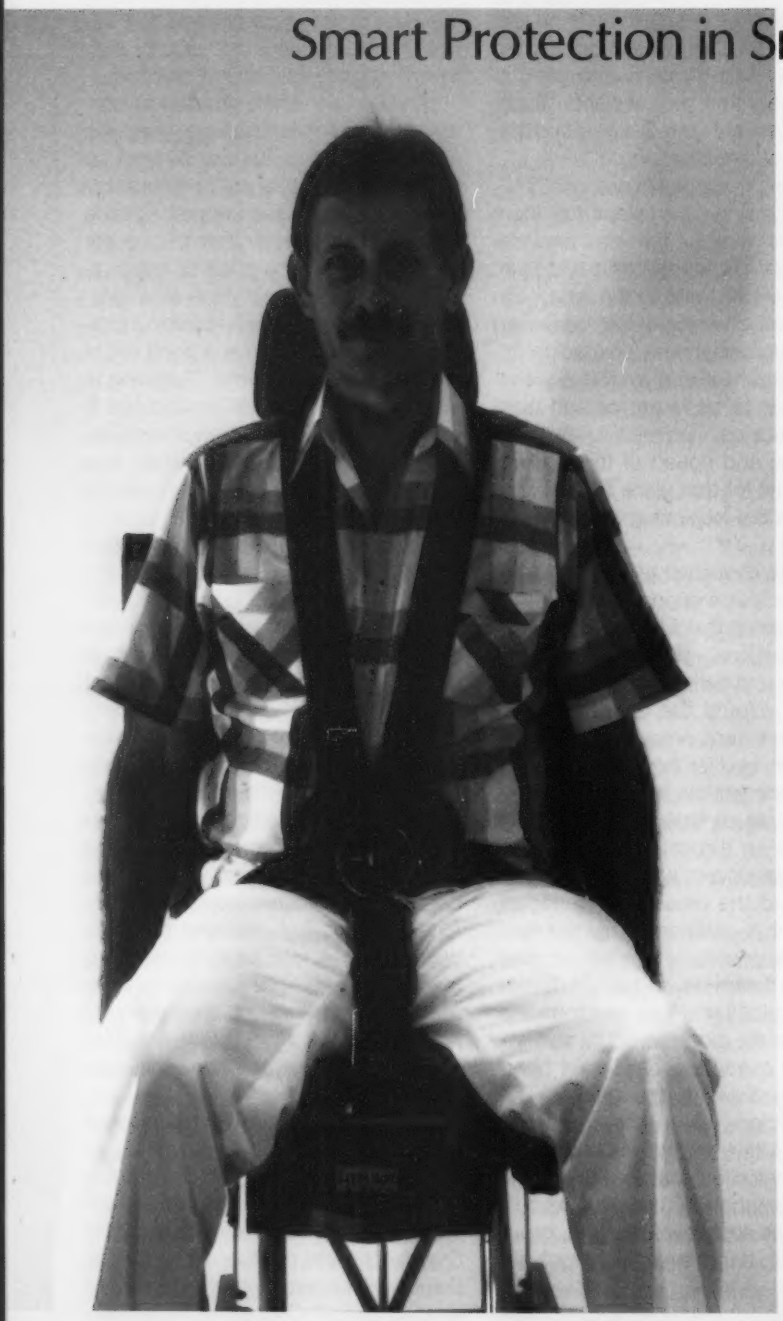
The rules, the Federal Aviation Regulations, the AIM, common sense, and courtesy serve us well. If we all try our best to be competent pilots, flying defensively and not allowing complacency to enter our lives, it stands to reason that we will be safer pilots overall. As my father-in-law, once an Army Air Corps pilot, always tells me, "Fly safe, keep your eyes open, and your head on a swivel."

Good advice from an old, not so bold, pilot.

Ms. Mattison is the Safety Program Manager at FAA Juneau, Alaska, Flight Standards District Office. For information on pilot operations at nontowered airports consult Chapter 4 of the AIM.

SEAT BELTS AND SHOULDER HARNESSES

Smart Protection in Small Airplanes



We all enjoy the convenience, fun, and safety of flying. We also understand that there may be times when our best efforts for a safe flight will be inadequate, and an accident could happen.

While most accidents are minor and pose no significant risk to the airplane or its occupants, some can result in major injuries or fatalities. However, studies of serious accidents have shown that the proper use of shoulder harnesses, in addition to the safety belt, would reduce major injuries by 88% and reduce fatalities by 20%.

Install Shoulder Harness in Your Airplane

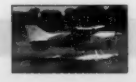
Shoulder harnesses have been required for all seats in small airplanes manufactured since December 12, 1986. If your airplane is not equipped with them, you should obtain kits for installing shoulder harnesses from the manufacturer or the manufacturer's local sales rep. Given the percentages above, the expense of retrofitting appears to be well worth it.

Use the Restraint System Properly

FAA regulations require that safety belts and shoulder harnesses (when installed) be properly worn during takeoffs and landings. If the restraint is not worn properly, it cannot provide full benefits and can even cause injury in a serious impact.

Tests have shown that slack in the restraint system should be minimal. In an impact, your body keeps moving until the slack is taken out of the restraint, but then your body is abruptly stopped to "catch up" with the airplane. The restraint should be adjusted as tightly as your comfort will permit to minimize potential injuries. (Figure 1)

The safety belt should be placed low on your hip bones so that the belt loads will be taken by the strong skeleton of your body. If the safety belt is



improperly positioned on your abdomen, it can cause internal injuries. If the safety belt is positioned on your thighs, rather than the hip bones, it cannot effectively limit your body's forward motion. (Figure 2)

Shoulder harness systems can use dual shoulder belts or a single diagonal belt similar to those used in automobiles. The belts should not rub against your head or neck. This is uncomfortable and will discourage use of the shoulder harness and can also cause neck injuries during an impact.

Single diagonal shoulder belts should be positioned so that the torso's center of gravity falls within the angle formed by the shoulder belt and the safety belt. Otherwise, your torso may roll right out of the shoulder belt during an impact and compromise your protection.

Because the lower end of the shoulder belt is usually fastened to the safety belt buckle or the buckle insert, the safety belt should be positioned on the side of your hip. This differs from the central location of the buckle that is common when only the safety belt is used.

Be sure that the safety belt is installed so that when the buckle is unlatched, both the safety belt and the shoulder belt are released. Also, be sure that the buckle can be unlatched without interference from the seat armrest, aircraft controls, or the interior wall of the airplane.

If the shoulder harness uses dual belts fastened to the safety belt near the center of your body, the shoulder belts will tend to pull the safety belt up off your hip bones. This could cause internal injuries in an impact.

When it is tightened about your hips, the safety belt should be positioned so that it makes an angle of about 55° with the centerline of the airplane (Figure 3, Page 18). This allows it to resist the upward pull of the shoulder belts, reducing the risk of internal injury. Otherwise, a tiedown strap from the buckle to the center-forward edge of the seat may be necessary to resist the upward pull of the shoulder belts.

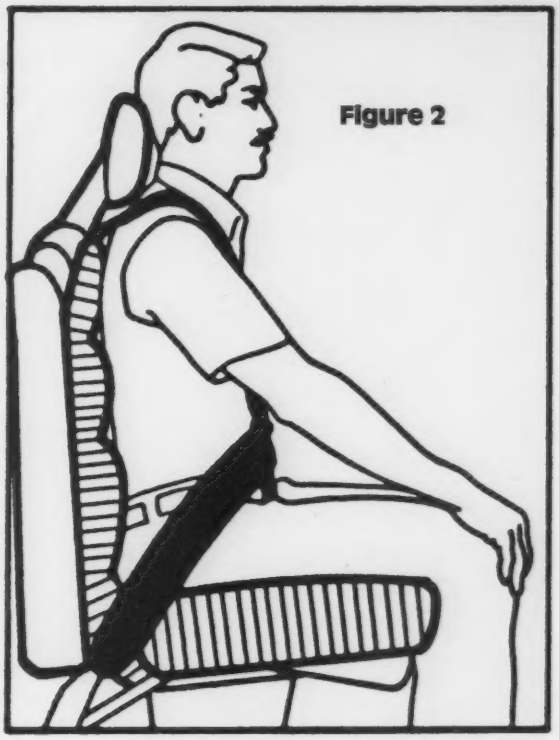


Figure 2

Figure 1

If your restraint system uses a tie-down strap, adjust it to remove all the slack when the restraint system is used. A properly installed and adjusted tie-down strap is completely safe.

Don't Forget the Children

Place them in modern automobile child safety seats, which may be installed in the airplane seat. (See the September 1996 issue of FAA Aviation News for the types of child restraint systems that the FAA has banned as unsafe in transport category aircraft.) Install the safety seat preferably in a rear airplane seat but not near an entry door or emergency exit. If you must use a front airplane seat, make sure that the child seat cannot interfere with the airplane controls or limit pilot access to the radios or flight instruments.

Install the child safety seat according to the instructions provided with the seat, using the airplane safety belt to secure it. Most safety seats for small infants are intended to place the infant in a rear-facing position and should be installed that way in the airplane.

Remember to consider the weight of the child and the seat when calculating the weight and balance!

When children outgrow the safety seat, they can safely get by using only the airplane seat belt. Their small size limits the chance that they might make contact the airplane interior during an impact. Larger children can use the shoulder harness if it doesn't rub on their face or neck when they are seated.

You should never, never hold an infant unsecured on your lap nor should you hold the infant on your lap and strap the seat belt around the two of you. This might exceed the limits of the belt. (Notwithstanding, some aircraft have bench seating with a lapbelt

Figure 3

designed to go around more than one person, but they are designed for people sitting side by side, not on another's lap.)

For a back issue of *FAA Aviation News* detailing the use of child safety systems in general aviation aircraft, please contact the Editorial Office at (202) 267-8017.

Some Things to Remember

- Seat belts alone will protect you only in minor impacts.
- Using shoulder belts in small aircraft would reduce major injuries by 88%, and fatalities by 20%.
- Shoulder belt kits are now available for most airplanes.
- Automobile child seats provide good protection for small children in aircraft.
- If improperly installed and used, restraints could cause injury.

Restraint systems in small aircraft: A Smart Idea!

The above article is based on the pamphlet of the same name, publication AM-400-91/2, prepared by the FAA's Aeromedical Education Division, FAA Civil Aeromedical Institute. For more information or additional of the pamphlet, contact Mike Wayda at (405) 954-6208.

What the FAR Say

FAR § 91.105(a)(1)and(2) says that—

During takeoff and landing and while en route, each required crewmember shall be at his or her crewmember station—unless the absence is in performance of their duties or for physiological needs—and shall keep the safety belt fastened while at the crewmember station.

FAR § 91.105(b) says that—

Each required flight crewmember shall during takeoff and landing keep his or her shoulder harness fastened, if one is installed, while at the crewmember station. This regulation does not have to be complied with if no shoulder harness is installed or if the crewmember would be unable to perform required duties with the shoulder harness fastened.

FAR § 91.107(a)(1) says that—

No pilot may take off a U.S.-registered aircraft (except a free balloon or an airship type certificated before November 2, 1987) unless the pilot in command ensures that each person on board is briefed on how to fasten and unfasten his or her safety belt and shoulder harness, if installed.

FAR § 91.107(a)(2) says that—

No pilot may take off, land, or operate an aircraft on the surface (same exceptions as above) unless the pilot in command ensures that each person on board has been notified to fasten his or her safety belt and shoulder harness, if installed.

FAR § 91.107(a)(3) says that—

Each person on board a U.S. registered civil aircraft (same exceptions as above) must occupy an approved seat or berth with a safety belt and shoulder harness, if installed, secured about him or her when the aircraft is operating on the surface, during take off and during landing. The exceptions are:

- For seaplane and float-equipped rotorcraft operations, the person pushing the seaplane or rotorcraft from the dock and the person mooring the seaplane or rotorcraft at the dock
- A person who has not reached his or her second birthday may be held on the lap of an adult occupying a seat or berth [Editor's Note: Legal, but not recommended]
- A parachutist may sit on the floor of an aircraft when engaging in sport parachuting
- A child may occupy an approved child restraint system

Lap Belts and AirShow Performers

Proper use and adjustment of seat belts and shoulder harnesses are essential to an air show performer's ability to complete high-performance, precision-flight maneuvers. What some don't realize is that proper use and adjustment of the restraint system on the ground can save your life as well.

We have two fatal examples that seem to prove this. Last year the pilot of a T6-G died when his aircraft nosed over on its back while on soft ground. The aircraft sank about 12 inches, and most of the inverted pilot's body weight was on his shoulders. His head was flexed forward, and his legs came up toward his head. In other words, he was hanging upside down with all his weight concentrated on his shoulders on the front of his body. Traumatic asphyxia occurred and the pilot died. Excessive slack in his seat belt adjustment caused the unusual position, and with all his weight on the buckle, the pilot was unable to release the lap belt and shoulder harness.

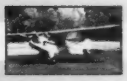
A similar situation appears to have been involved in the death of Charlie Hillard last April at Sun 'n Fun. His aircraft nosed over also after an uneventful landing, and Hillard was suspended upside down in a similar position. His cause of death was tentatively indicated as asphyxiation.

The International Council of Air Shows (ICAS) suggests the following procedure:

First, bring lap belts up tight with the buckle centered over the lower abdomen. Tighten the crotch strap and then tighten the shoulder harnesses. A ratchet adjustment, available on some lap belts, allows quick re-tightening in flight.

Most aircraft used in air shows and competition have crotch straps, but few warbirds have been modified. It's probably not necessary for mild positive G maneuvers but could save your life in the event of a roll-over accident.

This information was contained in the April 1996 issue of the ICAS Safety Center, its newsletter for ICAS members.



People in AVIATION

Louise Sacchi: Transatlantic Ferry Pilot

by Louise Oertly

The two women were unloading their overnight gear from a Bonanza when the Canadian customs officer finally asked them where the pilot was. This was 1962, and the officer was surprised to learn that the women were the pilots. Not a promising beginning for Louise Sacchi's career as a transatlantic ferry pilot, but one which she overcame to become one of the most successful entrepreneurs in the business of ferrying aircraft.

Born on April 15, 1913, in New York City, Louise Sacchi had an unusual upbringing. Unlike other girls of her time, her father taught her that she could do anything she made up her mind to do IF she worked at it with determination. He had found this to be true during his lifetime, and it was a huge legacy he left his daughter.

Gustavo Sacchi must have been a remarkable man. His dream of being an engineer had to be put on hold to support his family during the 1890's depression. Years later, after studying at night, he finally achieved his dream. It seemed for a while he had everything: a promising career as a mechanical engineer and a new bride when fate dealt him a nearly fatal blow. He was inspecting a furnace at a new factory when an elevator crashed through a wall and struck him on the head. The surgeons informed his wife that if he survived he would be paralyzed on the right side and unable to speak. It was Gustavo's sheer determination that overcame these predictions. Within a year he had relearned the mental and physical skills he needed for normal living and was back to work. The word "can't" was not in his vocabulary, and it was a lesson his daughter Louise learned and applied to her life as well.

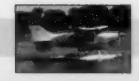
From an early age Louise was her father's shadow, working on whatever was their latest project—anything from the house to the car. Both ignored her mother's frequent complaints about getting dirty was "unlady-like." To her father it didn't matter, he only stressed that anything she did must be done perfectly and if she had trouble ask for help. "Never try to cover up a mistake, or leave a task unfinished," he told her.

By 1926 the family was living in Philadelphia. It was a fateful year for Louise. Her father took her to the Sesquicentennial Exhibition, and there she was introduced to the world of aviation. One of the displays featured a Standard JN-4 (Jenny) in which she was allowed to sit. She never forgot the experience.

It was in November of 1926 that her world came apart. Her father died suddenly of a heart attack. For next three years the family finances were solid, and Louise followed the flying careers of her heroes Lindbergh and Earhart, but the thought of herself becoming a pilot was placed in the back of her mind for economic and vision reasons. (Everyone knew that pilots needed perfect vision and Louise was nearsighted.) Then came the stock market crash of 1929 and history was repeating itself. Like her father, Louise's plans for engineering school (music school was her mother's idea) were put aside.

After graduation from high school Louise's first priority was to find a job and help support her family. Trained as a medical laboratory technician, she found that in 1932 jobs were scarce for newcomers and for women. With her father's determination alive in her, she turned this adversity into opportunity. She found that if she took nurses' training at Presbyterian Hospital in Philadelphia she would receive room, board, and $10 a month for the privilege of working six 12-hour days a week for next three years. Not the job she wanted, but it was a beginning. Eventually, she landed a job in her chosen field as a laboratory technician and pathology assistant at a Staten Island hospital. By 1938 she was working for the New York Life Insurance Company's Medical Department as a medical technologist. She was now living in Manhattan and making a staggering $150 a month. Enough money for renting an apartment on Park Avenue at 35 Street, running a car, visiting the theater—and eventually flying lessons.

On Labor Day 12 years after her all-too-brief sit in a Jenny, Louise finally decided to take her first ride in an airplane. She asked the pilot so many questions, that he finally asked her why she didn't learn to fly. By the fol-



lowing June she had "saved her pennies" and now had enough for several hours of dual instruction in a Piper Cub at $10 per hour. By September of 1939 she had passed the flight and written tests and was now a private pilot. The purchase of a used Piper Cub, nicknamed "Butterball," and the encouragement of her friends led her to get her ground and flight instructor ratings. Because of her glasses she couldn't get her Commercial, so she could not be paid for instructing. These were the days just before World War II and the government was sponsoring flight instruction for college students, male or female, so she did acquire a few students whom no one else wanted.

The year was 1941, and the war in Europe had started. The U.S. was not yet involved in the fighting, but had signed the Lend-Lease Act providing the British with $7 billion in military credits. As a result, pilots were being recruited to ferry these Lend-Lease aircraft across the Atlantic and airlines were losing their pilots to this oceanic ferrying trade. For the first time Louise found her gender as a pilot an issue when the ferry company turned her down because "We can't take a chance on losing a woman in the Atlantic Ocean, the publicity would be terrible." Louise couldn't persuade them that the lost of a man's life was just as important and newsworthy.

Next Louise tried applying to the three major airlines—Eastern, TWA, and American—for a job and return mail brought replies requesting "Louis" Sacchi come for an interview. (Yes, she had deliberately dropped the "e" in Louise.) Of course, when 6 foot tall Louise walked in for an interview, their first comment was, "You're a woman!" The interview was over as far as the airlines were concerned. But, remember, "can't" was not in Louise's vocabulary either.

Louise's next thought was to become a navigator as they were in short supply on the Atlantic ferry flights. Again the fact that she was a woman caused problems until she persuaded the Merchant Marine School in lower Manhattan to use her as a guinea pig for both the aerial and co-ed experiment. From fall of 1941 until the following spring Louise spent three nights a week learning navigation, two nights a week teaching ground school at the Grumman factory flying club in Farmingdale, weekends flying "Butterball," and weekdays holding down her full-time job at New York Life Insurance. Her determination paid off. She received a job offer as an Advanced Navigation Instructor at the #1 British Flying Training School in Terrell, TX. Against her friends' advice—Texas was still considered "frontier" by the fashionable Manhattan set—Louise took the job in May of 1942 leaving behind the security of her New York Life job. As Louise put it, her foot was "in the door of aviation so never mind security and pension!"

It was in Texas that Louise finally received her Commercial license with a vision waiver. The CAA (FAA's ancestor) noticed that Louise was a Flight Instructor, which were in short supply, and sent a letter asking if she would like to try for her Commercial. An appointment was made for a flight test. Once up in the air the inspector directed her toward a large field, took her glasses (for near-sightedness), and told her to fly across the field and over the wires at the other end. Louise couldn't see the wires, but she could see the poles and figured that the wires wouldn't be above the poles, besides which the inspector was in the airplane if she did get too close. Once across the field and over the wires the inspector gave her back her glasses and by the end of the flight she was a Commercial pilot. However, except for being able to charge for weekend flight instruction and flying the AT-6 on navigation exercises with her students, her career in aviation was no further along.

But after all her hard work, Louise found she was homesick for New York's weather and her family. In 1944 Louise went back to New York and took the only aviation job available, a run-up mechanic at Newark Airport for a company shipping fighters to Europe as deck cargo. At nights she went to school to learn the mechanics of big engines. This led to a job at Socony-Vacuum Oil (now Mobil) which lasted until the war was over and the veterans returned home and back to the jobs women had done so well during the war.

From this point on Louise's aviation career added a few more firsts: the first woman to run a seaplane base on the Delaware River and the first woman corporate pilot. However, in 1962 a new challenge presented itself to this freelance charter pilot/instrument flight instructor when she was

Continued on Page 23

"But, Doc, It's **Only** Aspirin!"

By Major Andrew C. Marchiando, USAF MC SFS

There I was, in the middle of a busy sick call, flu patients everywhere and one more patient walks in saying, "Doc, I think I've got the flu." It seems our 5,000 hour former fighter pilot, current C-12 (military King Air) driver, was so sick he could barely stand up and was as pale as the proverbial sheet. He wasn't throwing up but had stomach pain and almost G-LOCed [passed out] getting up from the couch. Then the answer to my question that locked on the probable diagnosis: "Yes, my stools are black."

A quick exam, including the dreaded finger wave, and I had my suspicions confirmed. Not the flu, but a gastrointestinal bleed, probably from a stomach ulcer. A blood count revealed his hematocrit to be 19 (42 is normal for males). He had lost over half his red blood cells. Naturally he was DNIF'ed [duties not involving flying] and admitted to the hospital.

The surgeon performed an esophagastroduodenoscopyóa boroscope of the GI tractóand he did indeed have a bleeding stomach ulcer. After four units of blood and some medications he felt much better.

What was the cause of this ulcer? Our pilot had these sinus headaches for several years and taking aspirin made his headaches go away. Usually, 20 or 30 aspirins a day!

Well, aspirin, or acetylsalicylic acid, erodes the stomach nicely and is a common cause of ulcers.

What about his headaches? The pilot had diagnosed himself with sinus headaches. Aspirin helped a lot, so he took a lot. After a while his headaches seemed to come when his aspirin wore off, so he took more, and the headaches would go away. He had been doing this for a couple of years. No big deal, right?

It was now, since it caused an ulcer, and he was addicted to aspirin. Yeah, a Lieutenant Colonel aspirin junkie!

Had our hero been flying? No, he hadn't flown the C-12, and he had the engine off his Pitts Special and was putting in a bigger one so he could really twist his tail.

I was glad the guy who now nearly blacked out getting out of his chair had enough sense not to fly. His plane was broken so he couldn't fly anyway.

After a couple of months, he was completely recovered. His blood levels were back to normal, a scope showed no ulcers, and he was off all medications. He had no problems stopping the aspirin, and his headaches went away. He received a waiver and was returned to flying duties.

And now for the rest of the story. A couple of years later, who shows up in my office? The same pilot. (By the way, I'd flown with him several times since, and he is one of the best pilots I've ever seen.) It seems he'd been under a lot of pressure lately. He was retiring, trying to sell a house, and was going to move to Florida to his new house on the airport (tough life, right?). His wife was already down there, and he didn't have another job lined up. He felt that pain in his stomach and had those black stools again. The antacids didn't stop it, so he came to sick call. A quick blood count showed him to be just as low as the first time. We admitted him to the hospital for a while and tuned him up a little before letting him go back out. We didn't transfuse him with any blood this time, as he wasn't quite as symptomatic, and there was more concern about transmitting an infectious disease. Of course, he was DNIFed and admonished not to fly at all.

He went home and showed up every couple of weeks for a blood count. A month went by and his blood count was up to 23.5. He hadn't been flying but was very anxious to get his (by now) three airplanes down to his new home in Florida. I told him his blood count was way too low to be flying and not to try it.

Two weeks later, he returned and his count was 26. Asked directly if he had been flying, he said he'd gone around the pattern a few times in another guy's plane and had done okay. He really needed to get his planes to Florida and wanted up. Again I told him he wasn't ready to fly.

Another two weeks later, he showed up in my office for his next blood count. It was better, now above 30, but I told him, "No, you're still not ready to fly." He agreed sheepishly. I questioned him on any recent flying, and he admitted he had flown one of his planes to Florida. I asked him if he had any problems and what altitude he had flown at. He said he flew at 7,000 feet, and he took a portable supplemental oxygen unit with him and used it during the flight. He said he had no problems flying down there. He added, he didn't have any problems on the first airliner coming back. But, on the second airliner, he became hypoxic and passed out. He recovered later, at a lower altitude.

After the flight, he asked the airline captain what the cabin altitude had been, and he was told "around 7,000 feet." Without the supplemental oxygen and a longer flight than the first one, his blood desaturated its oxygen, and he became hypoxic and lost consciousness.

He was now a believer, and was lucky to come back to tell me of his

adventure. He waited until cleared by his flight surgeon to resume flying.

Self assessment of medical problems and self medicating should not be done by the flyer. The flyer lacks the training necessary to make the proper diagnosis, appropriate medical treatment, and objective medical assessment of flying status.

Even seemingly minor problems that persist should be evaluated by the flight surgeon. If it's minor, they'll tell you that; if not, you'll get proper evaluation and treatment.

Experimenting with your life is not the way to test your medical judgment. Medical assessments, treatments, and determination of flying status should be left up to the flight surgeon.

Major Marchiando is a Senior Flight Surgeon currently completing his Masters in Public Health at Harvard School of Public Health. He is an Aerospace Medicine Resident at the USAF School of Aerospace Medicine, Brooks AFB in San Antonio,TX. This article was originally published in the Air Force Flying Safety Magazine and was reprinted with the kind permission of the author in the FAA's Federal Air Surgeon's Bulletin.

Louise Sacchi: **Transatlantic Ferry Pilot**

From Page 21

asked to be copilot on a trans-Atlantic flight. It was love at first flight, and after three years of freelance trans-Atlantic ferrying she decided to start her own company. Sacchi Air Ferry Enterprises (SAFE) would have a reputation for delivering the aircraft in as brand new a condition as possible and always cabling the owners regularly to advise them of the status of the flight. According to Louise, "word got around that it's a whole lot cheaper to let Sacchi bring it." Also being a woman generated a lot of news coverage as the only woman with an air ferry company.

In 1978 a deepening of her eye problem forced Louise to retire from the work she loved so much. She had delivered 340 airplanes all over the world (at least 225 of them to Europe). To Louise ferrying aircraft was a "wonderful way to satisfy my wanderlust and still earn my living. It would be foolish to pass up such opportunities to see the countries and meet the people of this fascinating planet." With her aviation career curtailed she would write two books: one to help other transoceanic pilots called Ocean Flying and an autobiography concentrating on her flying career called The Happy Commuter. She is still active in the 99's and has been editor of the Eastern PA Chapter's newsletter for many years.

Over the years Louise has received many awards, including: Distinguished Service Medal from Beech Aircraft (1968), Wright Brothers Award from the Aero Club of PA (1971), Cruz del Merito Aeronautico con Distintivo Blanco (1976 from Spain, first foreigner and second woman), McCollough trophy for Distinguished Service to Aviation (1979), and most recently the FAA Award for Distinguished Service (1996). Louise admits that many of her firsts were because it was what she really wanted to do, not because some woman had never done it before—that was merely the bonus.

Whether she realizes it, Louise is an inspiring person in aviation and an excellent role model to be presented for Women's History Month. Her determination and perseverance are worthy of emulation by girls or boys who today may sit briefly in the seat of an aircraft and dream of flight. Louise's advice to them would be, "if it is what you want to do, go for it."

But we all know from Louise you have to be single minded if it's worth doing.

PIPER CUB MONUMENT TO BE ERECTED

Continued From Page 11

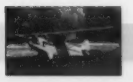
20,000 versions of the *Cub* in the 1930's and 1940's. The *Cub* would go on to become the primary trainer to nearly half a million pilots trained in government programs before and during World War II. Among those pilots was Allied Supreme Commander and later President Dwight D. Eisenhower.

A movement is underway to correct the oversight of no historical marker denoting the birthplace of the venerable *Cub*, which some call the most famous aircraft of all time. The University of Pittsburgh at Bradford and its President, Dr. Richard McDowell hope to remedy that. A preliminary design for the monument (by Memphis aviation artist Jeff Lewis) has been approved and a manufacturer selected (New Art Foundry in Baltimore, MD). The total cost for production and installation is expected to be $25,000.

The monument is simple in design, as was the *Cub* itself. From a pedestal on the ground, a bronze *Cub* with a six-foot wingspan sweeps upward to a height of seven feet. (Page 11)

A date is yet to be set for the installation and dedication ceremony, since all the funds have not yet been raised. When the dedicated is scheduled, there will be a fly-in of *Cubs* from all over the world.

To make a tax-deductible donation, send the donation to the University of Pittsburgh at Bradford, Education Foundation, Piper *Cub* Memorial, Bradford, PA 16701. For more information concerning the memorial project contact George Welsch at (704) 892-6917; email: 70774,150@compuserve.com or Terry Palmer at (814) 362-8531; email: 73363,3500@compuserve.com .



• Baja California

Congratulations on the great article by Keith Ballenger and Jacqueline Price "Journey to Mexico's Baja CA." I have been flying down there since the late '60's and just can't seem to get enough. Be it a fishing trip at Palmas de Cortez or Medical Clinic at San Javier, the people are great, scenery is fantastic, and the fishing is a fisherman's paradise.

There have been few changes since the article was written. Best check with the Baja Bush Pilots in Mesa, AZ. [Although Mr. Vagt gave specific examples, we chose not to list them because by the time his comments are printed, his examples might have changed again.) According to Mr. Vagt,] "...membership in Baja Bush Pilots is the only way to go, and you should purchase the manual 'Airports of Baja and NW Mexico' which is invaluable when flying down there at a very nominal cost for what you get. Arnold Senerfit has relinquished the operation to Jack McCormick whose phone number is listed. Their FAX is (602) 730-3251 and the Hotline is (602) 730-3252."

Hank Vagt
Covina CA

Thanks for your comments and information. Although FAA can't endorse any company or product, and we did not verify the accuracy of the Baja information given, we did check the Hotline number. We found it is a menu-driven phone system for anyone interested in calling the Baja Bush Pilots for information.

• Birdstrikes

I found your article "Birds Can Be Deadly" (January/February 1996) to be interesting and informative. The subject of bird strikes comes close to home because one of my partners had a strike two years ago, and the damage was extensive. We had to replace two ribs and several wing panels beside one of the main gas tanks at a cost of hundreds of dollars. The pilot heard a bang/thump during his landing approach. He made a safe landing and then checked the plane to find what had caused the thump. There was a very large dent/rip in the leading edge of the right wing. He never found what hit the wing but surmised it was a bird. (UFO?)

Although airport operators, the military, and the FAA have spent millions of dollars trying to solve the bird strike problem, the problem continues. However, your article reminded me of an ad I saw in a catalogue. The ad was for an electronic device that emits a powerful ultrasonic sound that was claimed to rid a house of bats, bugs, rats, raccoons, etc. Has anyone thought of a similar device to repel birds? Or would the ultrasounds interfere with radio transmissions?

Doug Mason
San Rafael, CA

Don't know. Does anyone have any data on such items? Assuming such devices work as advertised, the real challenge of course would be finding a TSO'd version for aircraft. Then there is the problem of finding a very, very long extension cord to plug the electronic device into. But all joking aside, does anyone have any creditable information on Mr. Mason's idea? If so, please let us know.

The ultrasonic sound should not effect radio frequency transmissions, since there is a significant difference in frequencies involved.

Our recent article about deer strikes highlighted another animal danger to aircraft. Your letter makes us wonder how effective are those ultrasonic deer whistles advertised for cars and trucks.

• Restricted U.S. Certificate

In addition to your loyal U.S. subscribers, you also have a large number of pilots abroad who appreciate the *FAA Aviation News*. I particularly find your articles on flight safety to be valuable and informative.

My pilot training was completed in 1971 when I was on active duty in the U.S. Army at Aberdeen Proving Grounds. After moving to Denmark in 1972, I acquired a Danish pilot's license. I have had this license, private pilot certificate) continuously since 1972.

As I regularly travel to the U.S., can you advise me as to what documentation is required for me to legally rent and fly an aircraft (Cessna 150 or 172) in the United States during such visits. I have a current medical certificate, pilot's license, and radio license as well as type certificates for Cessna 150 and 172 and Piper Cherokee.

This past summer, I rented aircraft in New Mexico and in Connecticut for dual instruction. Can I acquire a temporary U.S. certificate/permit to fly in the U.S.?

I believe that there are many of your foreign readers who might appreciate the official word on this question.

Frank Bason
Silkeborg, Denmark

There are two ways you can be certificated to fly here. You can simply meet all of the requirements for a U.S. certificate. This includes meeting the minimum training requirements as well as taking and passing the appropriate knowledge and practical tests. But as a licensed Danish pilot with appropriate medical, there is an easier way to fly in the U.S. The next time you are in the U.S., take your pilot license and medical documentation to the nearest FAA Flight Standards District Office listed in your local telephone directory under U.S. Government/Department of Transportation and ask for a Special Purpose/Restricted U.S. pilot certificate based on your Danish pilot's license. You will be issued a U.S. certificate with the equivalent ratings listed on your Danish license which will authorize you to fly such airplanes as the Cessna 150/152 or the 172.

If you have instrument privileges on

your Danish license and take and pass a U.S. written test on Federal Aviation Regulations (FAR) Part 91, Subpart B related to instrument flight rules (IFR) operating procedures, you may also be issued an instrument rating on the U.S. certificate.

If you don't have an instrument rating, or you don't take and pass the required IFR written test, your U.S. pilot certificate based on your foreign license will be restricted to visual flight rules (VFR) operation only.

Since you have flown in the U.S. before, you know that the fixed based operator you may contact about renting you an aircraft may and probably will require some type of checkout before renting you an aircraft.

• GPS Usage

The crash of the AA 757 into a mountain in Columbia brought to mind other incidents of crew distraction resulting in the aircraft being off-course and tragedy. I only wonder whether a simple moving map handheld GPS receiver may have saved all of those people. With the continuing effort to improve safety by sometimes incomprehensible regulations, why is something as simple as a GPS position overlaid on a scanned WAC chart not mandated? I find the positional awareness that one of these gadgets provides to be worth its weight in gold when flying IFR in busy airspace.

Paul Capek
Via Internet

Although we will never know what might have saved that flight and the investigation is on-going, the avionics industry is working on procedures and devices that go way beyond simple moving maps with scanned images of WAC charts. In one case, a moving digital map of the world is being used with GPS to show all of the terrain features around airports, etc., as the aircraft flies. The moving map shows the aircraft's position in relationship to the terrain and depending upon the projected trajectory of the aircraft, the system color-codes the terrain and sounds a warning if the aircraft is projected to hit the ground.

This system is currently being flown by an air carrier in serving Alaska. The system is designed to allow aircraft to operate more safely in hostile terrain by providing a visual representation of the surrounding terrain for aircraft in IFR conditions.

The low end of the GA aircraft market is not being forgotten either, companies are working on developing color moving map displays of VFR charts with GPS positioning that will be affordable to the GA pilot.

As in the home computer market, there is so much work being done that by the time you think of an idea, someone is testing it. For instance, one company is now selling computerized IFR approach charts on CD-ROM; others are working on flat-screen LCD panels for GA aircraft, and FAA, NASA, and industry are all working on the electronic GA aircraft of the future.

Of course, none of these whiz-bang gadgets replaces the pilot's situational awareness responsibility and the responsibility to always fly the aircraft.

As we have said before, the pilot is responsible for the accuracy of his or her navigation under VFR. As instrument pilots know, pilots flying under IFR in IMC need to be operating FAA approved navigation equipment appropriate to the flight. For pilots operating FAA approved IFR GPS units for approach use, the importance of GPS integrity monitoring such as RAIM or its equivalent can't be over-stressed because of its importance in flight safety in IMC. This critical approach requirement is a safety feature not found in handheld GPS units.

• Fuel Gauge Reliability

Regarding the rented Piper *Archer* the ex-Navy pilot planted in the ocean off Lanai, Hi, is it time for renewed education about light plane fuel gauges?

In the absence of requiring useful fuel quantity indicating systems, a mandatory dashboard placard "Not To Be Relied On" might be a step forward.

Everyone who has grown up flying light planes knows you fill them up before departure and fly for a certain amount of time without regard for any gauge. Pilots who come into the light plane world from military aviation need to have that drilled into them. I had difficulty believing it, too.

A.S. Warinner
Kihei, HI

You are right. All light airplane pilots need to remember the old flight formula of a known quantity of fuel divided by a conservative and known fuel consumption rate equals your flying time. If you add in the required FAR fuel reserves, you should stay out of the ocean or trees.

Light airplane pilots must remember the only accuracy requirement of a FAR § 23.1337(b)(1) fuel gauge is that it is calibrated to read "zero" during level flight when the quantity of fuel remaining in the tank is equal to the unusable fuel supply determined under FAR § 23.959. The regulations don't require such a gauge to accurately indicate fuel quantity at any other value.

FAA AVIATION NEWS welcomes comments. We may edit letters for style and/or length. If we have more than one letter on the same topic, we will select one representative letter to publish. Because of our publishing schedules, responses may not appear for several issues. We do not print anonymous letters, but we do withhold names or send personal replies upon request. Readers are reminded that questions dealing with immediate FAA operational issues should be referred to their local Flight Standards District Office or Air Traffic facility. Send letters to Editor, FAA AVIATION NEWS, AFS-810, 800 Independence Ave., SW, Washington, DC 20591, or FAX them to (202) 267-9463. INTERNET address: Phyllis.Duncan@faa.dot.gov

NEW MEDICAL STANDARDS WILL ALLOW WAIVERS FOR INSULIN-TREATED DIABETICS

Effective December 23, 1996, FAA is considering issuance of special medical waivers of Third Class medical standards for student, recreational, and private pilots who have insulin-treated diabetes. FAA's Federal Air Surgeon, Dr. Jon Jordan, considered over 800 comments—most favorable—on a 1994 notice of proposed rulemaking to change the policy. A panel of endocrinologists helped develop a protocol for the special issuance of medical certificates.

Pilots applying for the waiver will undergo a special medical flight test administered by a certified flight instructor. The pilot will also have to undergo an initial medical evaluation and show that his or her diabetes is well controlled and there have been no serious hypoglycemic reactions for a five-day period preceding application while on insulin.

Pilots who receive the waiver will have to fly with a blood glucose measuring device as well as snacks appropriate to maintain blood glucose levels. A medical examination every three months by a specialist is also required for the pilot.

For further information, consult your aviation medical examiner.

FCC RULE ELIMINATES AIRCRAFT RADIO STATION LICENSES

The Federal Communications Commission (FCC) has now abolished permanently radio station licensing requirements and fees for domestic aircraft radios. For aircraft licenses issues after July 17, 1994, FCC will issue partial refunds.

Owners who have submitted applications but not yet received the licenses will receive a full, automatic refund of $75.00, which should arrive no later than March 1997. Owners who received a license after July 17, 1994 will get refunds of up to $63 for the unexpired license, but they must apply for it. This is a refund of the regulatory fee; no refund of the application fee will be issued.

To obtain the refund for the unexpired license, send the license with "REFUND" written across the top to:

FederalCommunications
Commission
AIRCRAFT REFUND
1270 Fairfield Road
Gettysburg, PA 17325-7245

NOISE ABATEMENT AT NAPLES, FL

The Naples Airport Authority has asked us to help spread the word about their noise abatement procedures for jet aircraft at Naples Municipal Airport, Naples, Florida. If your corporate operation is headed for Naples, the Airport Authority asks for your "assistance, involvement, and cooperation" for the following actions:

- Effective last May (1996) there was a mandatory curfew imposed on Stage I Class jet aircraft from 2200 to 0700. There is also a voluntary curfew on Stage II and III jet aircraft during the same hours. The airport authority asks that "all owners and operators do everything to comply with these curfews."
- The Naples Airport Authority has revised airport rules/regulations prohibiting aircraft maintenance run-ups from 2200 to 0700.
- For helicopter operators, preferred helicopter arrival and departure routes have been established and published and are available upon request.
- They also ask that all turbojet aircraft abide by National Business Aircraft Association procedures while using the airport.
- The preferred runway for departures is runway 5; runway 23 is preferred for landing, winds permitting.

If you have any questions or comments—including potential adverse impact—on these procedures, the Naples Airport Authority asks that you send them to Mr. Curtis Reed, Operations Manager, Naples Airport Authority, 160 Aviation Drive North, Naples, FL 34104; (941) 643-0733. The fax number is (941) 643-1791, and the e-mail address is airport@naples.net .

YOUNG EAGLES ARE 250,000 STRONG AND GROWING

Last October, the Experimental Aircraft Association (EAA) flew its 250,000th Young Eagle, 11-year old Devin Kirkorian of Hanover, Ontario, Canada.

Young Eagles is the EAA program that hopes to introduce 1,000,000 young people worldwide to aviation by the 100th anniversary of the Wright Brothers' flight in 2003.

Nearly 16,000 pilots have volunteered their time and aircraft to the effort, and the program has had some interesting and lasting results. For example, as a result of the Young Eagles program in Las Vegas, NV, a magnet school for aviation studies was established. Two pilots—Tom Snouwaert of Gladstone, MI and Robert Swanson of Fort Washington, MD—have each flown more than 1,100 Young Eagles in the past four years.

For information on the Young Eagles program, including a schedule of upcoming Young Eagle events or how to initiate an event in your area, contact EAA at (414) 426-6253.

Young people are the future of aviation. Get them involved in that future now as a Young Eagle.

FREEMAN ARMY AIRFIELD MUSEUM

Freeman Municipal Airport in Seymour, IN—formerly Freeman Army Airfield—is establishing a museum to commemorate its 1942 establishment to train U.S. Army air cadets in multi-engine aircraft. Nearly 4,000 cadets went through Freeman and went on to fly B-24, B-25, B-26, and B-17 bombers.

The Airport is trying to locate as many former cadets as possible to support the museum and to donate memorabilia. There are hopes for a large reunion of Freeman cadets as well.

If you were a cadet at Freeman Army Airfield in Indiana, please contact Mr. Ted Jordan, the airport manager, at 1040 A. Avenue, P. O. Box 702, Seymour, Indiana 47274; (812) 522-2031.

SEVENTH ANNUAL MEETING OF BIRD STRIKE COMMITTEE

The seventh annual meeting of the Bird Strike Committee USA will be held August 12-14 at the Ramada Inn, Logan International Airport, Boston, MA. The meeting is sponsored by the Federal Aviation Administration, the U.S. Air Force Bird Aircraft Strike Hazard Team, and the U.S. Department of Agriculture Animal Damage Control Program.

The meeting should be of interest to military and civilian personnel responsible for airfield operations, wildlife managers, FAA airport inspectors, university researchers, engineers, pilots, air transport representatives, and anyone interested in preventing bird strike hazards.

The program will include panel discussions, training and papers on biological, engineering, environmental, training, and policy issues related to wildlife, aircraft, engine testing standards for bird strikes, habitat management programs on airports, landfills as bird attractants, and new wildlife management techniques. The meeting will include a field trip to Logan International Airport and surrounding areas. A bird strike reduction training session will be included in the program.

The program will include exhibits on the latest in bird and mammal damage control devices.

For additional program or exhibit information, contact Mr. Jim Forbes at 518-477-4837. His FAX is 518-477-4899. For anyone interested in making a presentation, contact Dr. Richard Dolbeer at 419-625-0242. His FAX is 419-625-8465.

Registration fee is $35 by July 14. The on-site registration fee is $45.

Ramada Inn Logan's telephone number is 617-569-9300. The reported motel rate for the meeting is $89 per night. You must mention BSC-US to receive this rate.

HOW ABOUT THESE SQUAWKS?

When I was Chief Pilot for a local flying club, one of my duties was to go over squawk sheets on each aircraft with the club's mechanic, who invariably complained that there was never enough information in the squawk for him to troubleshoot a problem. Seeing the following real-life examples in a new cyberzine called Avflash@avweb.com, brought back some fond(?) memories.

Problem: "Left inside main tire almost needs replacement."
Solution: "Almost replaced left inside main tire."
Problem: "Test flight OK, except autoland very rough."
Solution: "Autoland not installed on this aircraft."
Problem #1: "#2 propeller seeping prop fluid."
Solution #1: "#2 propeller seepage normal."
Problem #2: "#1, #3, and #4 propellers lack normal seepage."
Problem: "The autopilot doesn't."
Solution: "IT DOES NOW."

This is just a humorous way of saying that many times all the maintenance technician has to rely on to correct a problem is the pilot's description of it. There is no need to write reams and reams on a squawk, but date, time, altitude, heading, instrument settings/readings, and a descriptive narrative will help the mechanic fix the real problem on the first try.

NOTICE

If you've received the December 2, 1996, Letter to Pilots from Acting Administrator Linda Hall Daschle concerning operations at nontowered airports, you will have noticed that the letter referenced three advisory circulars (AC):

- AC 90-42F, Traffic Advisory Practices at Airports without Operating Control Towers
- AC 90-48C, Pilot's Role in Collision Avoidance
- AC 90-66A, Recommended Standard Traffic Patterns and Practices for Airplane Operations at Airports without Operating Control Towers

The DOT Warehouse is now out of stock of two of the AC's—90-42F and 90-66A. At publication of this issue, there is apparently sufficient stock of AC 90-48C at the DOT Warehouse address provided in the letter.

The two out-of-stock AC's are currently being reprinted, but we have a limited supply in our editorial offices. If you received the Letter to Pilots and would like a copy of the two AC's, please call the Editor at (202) 267-8017 and leave your name and current address on voice mail. Or you can send your name and address via e-mail to Phyllis.Duncan@faa.dot.gov. The regular mail address is FAA Aviation News, AFS-810, 800 Independence Ave., S.W., Washington, DC 20591.

We apologize for any inconvenience this may have caused.

GENERAL AVIATION TO THE RESCUE!

If your local city or town council is showing signs of restricting or closing your airport, you might have them contact the citizens of McCall, ID.

December and January's snows and subsequent floods after a warm spell left McCall—just over 80 miles north of Boise—cut off from everything in every direction. Everyone in town began running out of the essentials, but someone got the idea of calling the local airport, which was high and dry. McCall's two fixed based operators had a booming business for several days, hauling supplies, carrying passengers to more hospitable climes, and conducting emergency medical flights—from dawn until dusk and without incident. Some local people got much needed jobs when all this activity showed a need for more ground personnel at the airport.

An airport is an asset to the entire community, not just a benefit for the few. Let's hope it won't take a natural disaster to convince other communities of the aviation asset they possess.

Thanks to AVweb NewsWire (www.avweb.com/newswire) for this information.

CALENDAR OF EVENTS

Organizations who wish to have their events published in FAA Aviation News, *because of our production schedule please be advised we need to receive the information at least 60 days but preferably 90 days before the issue in which it is to appear. Send notices to Editor,* FAA Aviation News, *AFS-810, 800 Independence Ave., SW, Washington, DC; fax: (202) 267-9463; e-mail: Phyllis.Duncan@faa.dot.gov .*

ATTENTION IA'S AND AMT'S

FAA's Scottsdale, AZ Flight Standards District Office (FSDO) and Chandler Gilbert Community College are sponsoring the Greater Southwest Aviation Technician Symposium March 14 - 15, 1997 at Williams Gateway Airport, Mesa, AZ. Attendance at this two-day (0730 to 1700 each day) symposium qualifies for Inspection Authorization (IA) renewal. Quality technical and regulatory training programs will be presented, and there will be numerous vendor displays.

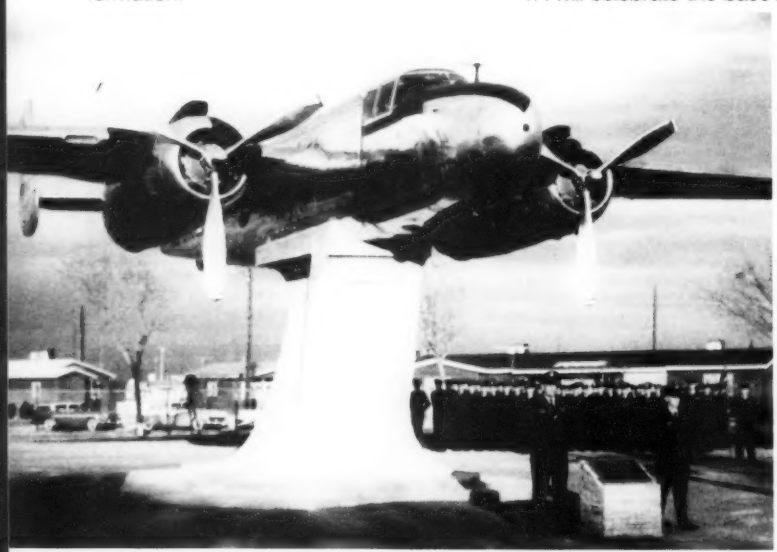
For lodging and other information contact either Mary Nielson or George W. Bean at the Scottsdale FSDO at (602) 640-2230, extension 262.

GRASS VALLEY AIRFEST

The Golden Empire Flying Association is sponsoring the 20th Annual Grass Valley AirFest to be held July 12 at the Nevada County Airpark, Loma Rica Dr., Grass Valley, CA. For further information contact Julia Amaral at (916) 274-1040.

REESE AIR FORCE BASE INACTIVATION

From March 31 to April 2, personnel at Reese Air Force Base in Lubbock, TX will celebrate the base's long history of training more than 25,000 military pilots at an inactivation ceremony. Personnel—civilian, military, or contractor—who lived and worked at Reese from 1941 to the present are invited to attend "Reese Reunion '97—The Final Chapter." Tours and several inactivation ceremonies for the base's various Wings as well as a banquet will be held over the three-day event. For further information, contact William P. Tynan of the 64th Flying Training Wing at (806) 885-3410.



Last TB-25 to fly at Reese was placed on static display adjacent to the main gate the day of the last class to fly it graduated in January 1959. The TB-25 flew at Reese from August 1949 to January 1959. The presence of the TB-25, either in the air or on display, has been a common thread in t he lives of most of Reese's 25,000 flight training graduates.

Editor's Runway

from the pen of Phyllis-Anne Duncan

The last time we'd tried commentary, we made some bureaucrats uncomfortable with the thought of a government publication publishing opinions. Consequently, I'll preface these commentaries by saying that "the opinions expressed herein do not necessarily reflect official policy of the Federal Aviation Administration."

The Perils of Public Domain

Because this magazine is published by the government and by federal employees, its contents are public domain; i.e., the public can use the material herein anyway they want. That means if you have a local newsletter for your airport or flight school or flying club, you can use anything out of this magazine in your publication without credit (the exception being the occasional copyrighted article). We've always encouraged people to do that, and most people who have used an article have graciously provided credit to the magazine.

Taking a bylined article from *FAA Aviation News*, putting another person's name on it, then representing it as original material for publication in another magazine is altogether a different matter. In fact, it is plagiarism. I mean, we all probably did it in sixth grade when we realized a book report was due the next day and we copied a review from the book cover. But now we know better. Please, take whatever you like from the magazine and reprint it as much as you want. You don't have to give the magazine credit, but give the original author the credit he or she deserves.

Women's History Month

I'd like to use Women's History Month 1997 to cast some thoughts out about two women in aviation history who recently accomplished some things of significance. Last year Dr. Shannon Lucid spent six months orbiting the earth in the Russian Space Station Mir. This mother, wife, pilot, and biochemist is an inspiration and role model to anyone—male or female. When her two Russian Cosmonauts expressed happiness at her pending arrival because "women like to clean," she handled it admirably, as she did the hand-printed sign her fellow cosmonauts placed on the instrument panel when they were on extravehicular activity: "DO NOT TOUCH!"

Dr. Lucid is now the senior American person in space and the first woman recipient of the Congressional Space Medal of Honor. Dr. Lucid remarked at the ceremony where President Clinton awarded her the Space Medal of Honor that she and her two fellow Russian space travelers spent long hours discussing the irony of the fact they'd all grown up fearing each other. Now, here they were in a space station, named for peace, cooperating, working together. Cooperation in space, she feels, is our best hope for a world where peace is the rule and not the exception.

My heart beats faster when I think of the children who today can look up to Dr. Lucid and realize that anyone can someday fly in space.

Now, let me tell you a little about Andrea Lynn Drake, who soloed a Tampico on December 7, 1996. Andrea grew up hearing me talk about airplanes and my love of space, and ever since she could articulate the words she has wanted to fly in space. She's had all the ups and downs every student pilot has had —weather cancellations, mechanical cancellations, flight instructor cancellations—but the day came, and she joined the rest of us in this wonderful club of aviators. I wasn't there physically, but as this excited young woman described it to me over the phone I could see everything as it happened in my mind's eye. After all, I had done it, too, nearly 20 years before.

When you peer into the eyes of a small child who declares that she wants to fly, sometimes it may be difficult for some to envision that coming true. Now that it has, I marvel at the journey. Raised by a divorced single mother, from a young age Andrea had to grow up fast and without a father who unfortunately opted out of her life. Sometimes her youth was sacrificed for meeting her family responsibilities. Yet, in some ways she's a typical teenager with The Cranberries blasting out of her dorm room; then, she talks to me about flying. The hair on my neck stands on edge—this "little girl" who was once so shy talks like a pilot. I have to clear my throat so she can't hear my own emotion from knowing I in some small way have given a pilot to the next generation of aviators.

She's a dedicated young woman, and she is going to be one great pilot. I can't wait for the day that CFI Andrea Drake will give me a biennial flight review.

'Til next time...

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